

AGROFUELS IN BRAZIL

Report of the Fact-finding Mission on the impacts of public policies encouraging the production of agrofuels on the enjoyment of the human rights to food, work and the environment among the peasant and indigenous communities and rural workers in Brazil



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Abstract

FIAN International, Misereor, EED, Bread For the World, ICCO&Kerkinactie, HEKS and FIAN Holland, with the participation of delegates from the small-scale farmers network of West Africa (ROPPA), of the Colombian human rights organization *Corporación Colectivo de Abogados "José Alvear Restrepo"* and independent experts, conducted a Fact-Finding Mission in Brazil from April 3 to 10, 2008 to investigate the current impacts of the Brazilian governmental policies and programs related to the production of agrofuels. The investigation was carried out from the perspective of human rights, in particular the rights to food, work and to a clean environment,

The Fact-Finding Mission was conducted at the request of organizations of the Brazilian civil society and its main purposes were the following:

1. Make an on site check of the impacts of the massive territorial expansion of mono-cropping for the production of agri-energy in three different regions of Brazil considering the local availability of food, availability of land for agrarian reform, conflicts over land, labour conditions and environmental impacts.
2. Document the key role of the Brazilian State (legal framework, financial support in public funding, support infrastructure, multilateral negotiations and, particularly, the political support to the agribusiness) in promoting agrofuels, both domestically and internationally, and assess this role from the perspective of human rights obligations assumed by the Brazilian State.

The Mission's final report will be presented in relevant international forums, such as the EU, FAO and the UN to demand the effective protection of the human right to food.

The Brazilian government has stood out internationally for advocating the use of agrofuels, presenting them as one of the solutions to the energy crisis resulting from the increasing scarcity of fossil fuels, as a potential answer to the climate problems of the earth and as an opportunity to tackle the issue of hunger in poor countries. The Brazilian government has also insisted that the massive use of agricultural products for fuel production does not affect food production in Brazil or lead to higher food prices and that, therefore, it does not represent a risk to the right to food or to food security, nor does it represent a threat to the environment. Actually, the massive production of agri-energy is considered by Brazilian government officials as an "instrument to fight poverty". According to the Brazilian government, it

was within this spirit that Brazil recently established the National Biodiesel Program. Brazil was the first country to foster a broad program for the development and large scale use of a fuel derived from agricultural products, namely, ethanol made from sugar cane. Additionally, as is widely known, President Lula da Silva's government has declared the fight against hunger as the number one priority of his administration and has explicitly included structural reforms, in particular agrarian reform and the strengthening of peasant family agriculture as key reforms for the achievement of these goals.

On the other hand, our partner organizations in Brazil have been warning us about the negative consequences of the policies for the promotion of agrofuels regarding the exercise of the human rights to food, work, health and the environment, particularly of peasant communities, of traditional peoples and rural workers. The accelerated expansion of crops of agricultural products for fuel production, encouraged by public policies and resources, has contributed to a worsening of land concentration, excessive exploitation of workers, destruction of forests, displacement of food production, land fertility loss, the drying out of springs and rivers and, environmental contamination, in addition to undermining and twisting policies designed to guarantee human rights, such as agrarian reform policies, demarcation of the lands of indigenous peoples and support to peasant agriculture.

The Fact-Finding Mission to Brazil aimed at collecting information to assess whether the Brazilian State is complying with its obligations related to international human rights law assumed with the ratification of human rights treaties, particularly, the International Covenant on Economic, Social and Cultural Rights and other treaties and international conventions dealing with the Right to Adequate Food, the Right to Work and Environmental Rights. The members of the Mission visited three different areas with different problems: in São Paulo, the Mission was acquainted with the effects of the massive production and expansion of sugar cane plantations for ethanol production on working conditions and the environment. The Mission talked with union organizations that represent workers in the sugar-alcohol industry, with non-governmental organizations and government officials and visited agrarian reform settlements to see how sugar cane plantation expansion is rendering their production methods and life vulnerable. In Mato Grosso do Sul state, in the city of Dourados, the Mission examined the impacts of the unchecked expansion of sugar cane production on the Guarani Kaiowá indigenous people, particularly the way it affects their right to food, land and the environment. Additionally, it also checked labour conditions of

indigenous workers in sugar cane cutting. Finally, a team of the Mission also went to the state of Piauí, to the town of Canto do Buriti, to examine the biodiesel production project at Santa Clara farm involving settled families and the company *Brasil Ecodiesel*. The Mission spoke with settled families, unions, NGO's and government officials about the development of the projects and existing problems.

The Brazilian State has ratified a number of human rights treaties, thus assuming before the international community the obligation to implement them. Domestically, we see progress in the inclusion of these standards in national regulations. Additionally, in the design of some public policies, we can see a significant effort to guarantee social human rights. Also worth mentioning is the fact that we have perceived, in some sectors of the Brazilian State, a real commitment to the actual implementation of these rights. Despite this, however, we found that there are gaps in some points of the regulations and, particularly, in their implementation. We also found that influential sectors connected to the agribusinesses whose interests are threatened, have tried to create legal and political barriers to the application of human rights guidelines in the country.

In spite of the progress achieved in the past few years in the reduction of income inequality in the country, a concerning situation still remains: the wealthiest 10% hold 45% of the national income; the poorest 50% hold only 14% of the total income. In 2006, there were 36 million people living in poverty, with an income below R\$ 125.00 per month. In 2004, official data showed that 72 million Brazilians (39.8%) were somehow exposed to *food insecurity*; out of those, 14 million (7.7% of the population) suffered severe food insecurity, i.e. went hungry.

Brazil has one of the world's highest rates of *land tenure concentration*. In 2003, there were 4.2 million registered rural properties, occupying a total area of 420 million hectares of land. The owners of properties with more than a thousand hectares (that is, 1.7% of the total number of registered properties) owned 43.7% of the total registered area, i.e. 69,123 properties held 183 million of hectares in private hands. At the other extreme, properties with an area of up to 10 hectares accounted for 31.6% of the total number of registered properties and held only 1.8% of the total area, i.e. 1.3 million properties had an area of 7.6 million hectares. The GINI land property concentration index was 0.802 in the year 2000.

The Brazilian land distribution model is unfair, exclusionary and predatory. The modernization of Brazilian agriculture has increasingly excluded people working in rural areas: *between 1985 and 2006, 6.9 million people left their occupation in agriculture*. In the past 25 years, over 30 million peasants have had to leave the rural areas to live in the outskirts of big cities. According to estimates by the Brazilian government, there are *3.1 million landless families and around 3.4 million families with insufficient land* for a sustainable livelihood. The impacts of the

modernization of agriculture have also been felt by indigenous peoples, on traditional communities and on the environment.

Considering the reports that have been gathered, which were compared with and corroborated by a number of studies from different sources and interviews with scholars and experts specialized in the subject, as well as with government officials, the Mission concluded that systematic and multiple violations of the human rights of workers, indigenous peoples and small-scale peasant producers have been committed and that these violations are either directly or indirectly connected to public policies that encourage the production of agrofuels. These violations occur at the various levels of human rights obligations assumed by the Brazilian State, namely the obligations to respect, protect and fulfil economic and social rights.

Next are some of the main problems found during the Mission:

- The working conditions of sugar cane cutters reported to the Mission are, generally speaking, degrading and dehumanizing and therefore not compatible with human dignity. Under the current conditions, working in sugar cane cutting compromises the physical integrity of workers and, for this reason, it cannot be considered decent work. The Brazilian State is not complying with its obligation to protect sugar cane workers from the appalling working conditions imposed by the sugar-alcohol industry.
- Working conditions of sugar cane cutters compromise the physical integrity of workers, result in serious occupational diseases and, among other things, have even caused the death of workers. The main factors affecting workers' health are the following: (a) Chemical: workers are exposed to pesticides, herbicides and maturing agents applied to the sugar cane; (b) Physical: excess heat, stress caused by heat, moisture and sun exposure; (c) Mechanic: problems worsened by inadequate personal protection equipment that hurt or injure workers; (d) Biological: bacteria, fungi and viruses, poisonous animals; (e) Organizational: payment by production, leading sugar cane workers to work excessively, individual and group production targets, connected to forms of payment, causing conflicts among workers; (f) Operational: posture, strength, repetitive movement (approximately one machete blow per second).
- Sugar cane cutters are subjected to very poor lodging and dietary conditions which, from the point of view of interdependence and indivisibility of human rights, seriously affect the rights to adequate food and housing. The degrading housing conditions, the family and social isolation of migrant workers and the excessively long working days are all factors that prevent workers from feeding themselves properly.
- The spurious and illegal practice of outsourcing the contracting of workers increases their vulnerability, leading to the emergence of several cases of slave and

child labour in the sugar-alcohol industry. In 2007, the sugar-alcohol industry had the largest number of workers freed from slave labour conditions by law enforcement teams of the Brazilian State; among them were several indigenous rural workers in Mato Grosso do Sul state.

- In the social domain, the Mission also found a situation of insecurity and disregard of workers facing the growing unemployment in this sector caused by mechanized sugar cane harvesting. Additionally, the State has not guaranteed proper social services to sugar cane workers.
- Extensive sugar cane monocropping has harmful environmental effects: loss of biodiversity due to the use of pesticides, the potential contamination of water reserves, intensive water use for sugar cane irrigation, use of vinasse in the fields for fertigation purposes, resulting in the contamination of land and groundwater and sugar cane burning that pollutes the atmosphere, affecting the airways of thousands of people.
- The policies designed to encourage agrofuel production, even when they take social-environmental aspects into account, are in the end extremely limited and twisted by the agricultural model they are part of. Energy production from agricultural products is based on a raw material monocropping production model that concentrates land and production, with major social and environmental impacts. The accelerated expansion of agrofuel production worsens, in this context, the most harmful elements of this model. In addition to the aforementioned labour and environmental problems, there is a process of land concentration, increase in land prices, an unchecked process of land purchase by foreigners and the non-enforcement of land use planning rules. This process has contributed to minimizing the significance of the agrarian reform program and has pushed agrarian reform and peasant family agriculture settlements to replace food crops with sugar cane plantations. Further contributors to this process are the lack of regulation of the sugar-alcohol industry, allowing the concentration, verticalization and denationalization of this industry. Additionally, the process of the expansion of sugar cane plantations has postponed the demarcation of indigenous lands in the state of Mato Grosso do Sul, further worsening the violations of the right to land and food of indigenous peoples, particularly the Guarani Kaiowá. In the state of Mato Grosso, where there has been a strong expansion of sugar cane production, there was a 99% increase in murders of members of indigenous communities in 2007.
- Protection of the right to food and the environment of traditional communities in the *Cerrado* and the Amazon region is not sufficient and is threatened by the expansion of sugar cane (and soybean) production and also by displacement of cattle and soybean production to the Amazon region

as a consequence of the expansion of sugar cane production in the Mid-Southern Brazilian regions. Studies have shown serious threats to the rights of traditional communities to a clean environment and, as a consequence, to their right to food as a result of this expansion, showing gaps and distortions in the actions by the Government to protect the rights of the traditional communities in these regions. Data provided by the Land Pastoral Commission (CPT) have shown an alarming increase in the use of private militia against workers in the form of forced evictions and murders, precisely at the agricultural frontier expansion regions. 41% of the violence cases in rural areas in 2007 affected traditional communities that live, to a large extent, in the Amazon regions. This means that the State is failing to comply with its obligation of protecting traditional communities and their access to land and natural resources. Additionally, the destruction of the environment and biodiversity through deforestation of the Amazon Rainforest continues and has intensified again since the mid-2007, in spite of the measures adopted by the government to curb it. Finally, the government policy for the expansion of sugar cane and soybean production in the *Cerrado* in a disorderly manner represents a serious risk to this important biome and to its biodiversity. This situation is made worse by the lack of a surveillance system such as the one in place in the Amazon region. But this is not the whole story; we know that the *Cerrado*, like the Amazon, is not an empty and uninhabited area available for the expansion of agricultural crops for energy production, as some government documents on agri-energy try to show. The disregard of the *Cerrado* populations and the disordered and unchecked occupation by sugar cane plantations represent a serious threat to the rights of peasant and traditional communities in this region.

- Sugar cane plantations have displaced and replaced food crops and animal production, leading to a reduction in the area available for food production in these regions. The Professor of agricultural geography at São Paulo University (USP), Ariovaldo Umbelino de Oliveira, is emphatic: "IBGE (Brazilian Geography and Statistics Institute) data, between 1990 and 2006, show a reduction in food production caused by the expansion of sugar cane acreage, which in this period increased by over 2.7 million hectares. Taking the cities that had an expansion greater than 500 hectares of sugar cane in this period, we find that they had a reduction of 261 thousand hectares of the area planted with beans and 340 thousand hectares of the area planted with rice crops. This reduced area could have produced 400 thousand tons of beans, i.e. 12% of the national production and 1 million tons of rice, or 9% of total Brazilian production. Additionally, in these cities there was a reduction in production of 460 million litres of milk and over 4.6 million head of cattle". Between the 1990/91 and 2007/08 harvest, the area used for

sugar cane and soybean production was expanded by 14.1 million hectares and the area dedicated to the production of beans, rice and cassava reduced by 3.1 million hectares, with a relative stagnation of the volume produced or gains obtained only from increased yield (i.e. intensification of land use and greater costs to farmers).

- In this context, we also find a strong pressure on food prices, particularly on the prices of food staples. The price of beans, for example, has increased 160% in 12 months. Rice prices have also skyrocketed, making the government stop exports of government stocks to guarantee domestic supply. We fear that this situation, since it penalizes precisely the poorest, might undermine the achievements made in the field of the right to food and poverty reduction through a recovery of the value of the minimum wage, more jobs, social security and social programs.
- In the biodiesel production project, we found food vulnerability as a result of the low income of the families living in the settlement, insecurity regarding land tenure, intimidation of free organization, dependence of settled farmers on the company, which generates debt and hampers the development of family producers.
- Although the biodiesel production program takes socio-environmental elements into account, it has privileged the use of soybeans as raw material, which benefits particularly the soybean multinational corporations, and not the peasant family farmers. Several studies have shown the various socio-environmental impacts of the expansion of the soybean plantations in Brazil. Additionally, studies have also proven that public policies favouring agribusiness have driven soybean production, while causing stagnation or decrease in the production of staples for human consumption, generating food insecurity and violating the human right to adequate food, as mentioned above. Finally, although Brazil is a large soybean exporter, the significant increase in the use of soybean oil for biodiesel production, besides affecting prices, making its availability to the most vulnerable sectors of the population difficult, may also represent a risk to the Brazilian domestic market supply. Soybean oil prices have rapidly increased on the international market: in 2001, it cost USD 306.00/ton; in March 2008, it reached USD 1,343.00. With the increase in prices on the international market and the growing use for biodiesel production, soybean oil prices also skyrocketed on the domestic market. In the past 12 months, soybean oil prices increased 56% for Brazilian consumers. In this regard, the Mission considers that insisting on biodiesel production mainly from soybean oil is in contradiction to the social inclusion components of the program, in addition to representing a reckless move in the current world context of scarce food and agricultural inputs, representing an additional threat to the right to food.

Recommendations

In order to contribute to the observance of International Human Rights Treaties, the Mission wishes to make the following recommendations to the different levels of the Brazilian State:

In the short term:

a) Regarding the human right to work and labour rights of rural salaried workers, including indigenous rural workers, in the sugar cane sector:

- The Mission recognizes the extremely important work that the Department for Labour Inspection has been carrying out in cooperation with the Labour Department of Justice, to inspect and safeguard the enforcement of labour laws in relation to sugar cane production. The Mission recommends that the work of these institution continue and be strengthened, that they be provided with enough resources and capacity to perform regular inspections paying special attention to the issuance of Legal Working Papers, to proper lodging conditions and to food, to the improvement and adaptation of Personal Protection Equipment (PPE), to the abolition of labour outsourcing, to the eradication of slave labour, of child labour, to slave-like labour and other degrading and inhuman forms of labour, prioritizing the areas in which agricultural expansion for agrofuel production is taking place.
- The urgent passing of the bill #438, of 2001, proposing an Amendment to the Constitution (changing article 243 of the Brazilian Constitution), which sets forth that rural and urban properties where slave labour is exploited should be expropriated and the lands given to land reform programs or housing programs for low-income families.
- Investigate the cases of death of workers in the sugar-alcohol industry due to exhaustion. Present specific suggestions to prevent more deaths. Check the possibility of introducing regulations that render employers legally responsible for cases of sudden death due to exhaustion.
- Render the disease and injury record efficient, so that workers who suffer injury can receive sick pay from social security services by filling in the Occupational Accident Report (CAT).
- Inspect the enforcement of the Federal Court decision regarding the Social Security Plan that companies in the sugar-alcohol industry must grant to workers.
- Not allow the passing, at the Senate, of Provisional Presidential Decree #410 that hampers inspections by the Ministry of Labour and favours informal labour in rural activities.
- Safeguard the right to education of the children of migrant workers.

b) Regarding the human rights to food, the environment and the self-determination of indigenous peoples, particularly in the state of Mato Grosso do Sul:

- FUNAI (the Brazilian National Foundation for Indigenous Peoples) should treat with extreme urgency the legal process of identification and demarcation of the territories of the Guarani Kaiowá people, safeguarding security so that officials and technical staff can carry out this process.
- The Brazilian State should safeguard access to food of the vulnerable indigenous peoples through the regular distribution of staple food baskets in proper quantity and quality, respecting the dietary culture of these peoples, until public policies (safeguarding territory, generation of jobs and income) have been implemented, generating the conditions to guarantee the right to feed themselves of indigenous peoples.
- The Brazilian State should take the proper preventive measures to avoid the impacts caused by the expansion of sugar cane plantations for the production of agrofuels on the rights of indigenous peoples, establishing criteria that take human rights into account when funding or authorizing new projects in the sugar-alcohol industry close to indigenous areas.
- The Ministry for Social Development (MDS) and the Ministry of the Environment (MMA) should safeguard resources for the "Indigenous Portfolio" Project (very small businesses), as well as for a Training Program for indigenous labour in technology use.
- The MMA should implement a policy to fight the illegal exploitation of natural resources and for the reclamation of degraded areas, aiming at restoring the basic conditions of the way of being and living of Guarani Kaiowá peoples, safeguarding their right to food.
- The MDS, FUNASA (National Health Fund) and the state government should establish an agreement to create separate public policies for indigenous peoples, safeguarding their broad participation in the formulation of these policies.
- The State enforcement agencies should give top priority to safeguarding the due protection of indigenous peoples, fighting practices that affect their human rights as a result of the unchecked expansion of sugar cane plantations in the state. Government officials should investigate cases of violence against members of indigenous communities, punishing the perpetrators.
- The Ministry of Justice should provide effective mechanisms for the protection of the Guarani Kaiowá against the practices of criminalizing their struggle for land and for their rights in general.

c) Regarding the right to food, land and work of the settled workers of the Biodiesel project in the state of Piauí:

- Access to land: The Piauí State Government should safeguard the permanent maintenance of lands in the hands of settled families with secure title deeds.
- Organization: The state must protect the freedom of organization of farmers in associations vis á vis the practices of intimidation and repression carried out by the company *Brasil Ecodiesel*.
- Economic status/earnings: Family producers should be guaranteed real participation in the negotiation of prices and minimum earnings should be safeguarded, corresponding to at least one monthly minimum wage per family. In order to achieve this goal, we recommend the establishment of transparent criteria for the payment of a fair price (for example, the establishment of a tripartite group to negotiate contracts between the Government, corporations and workers/their legitimate representative organizations). Farmers' debts should be cancelled and they should have the possibility of selling their products to the best-paying buyers.
- Technical support: In order for producers to increase their crop yields, they should be given proper and efficient technical support. We recommend that the government, through a MDE, inspects the company *Brasil Ecodiesel*, enforcing compliance with the technical support regulations established at PNPB (National Program for Biodiesel Production and Use).
- Production model: The Company should allow producers to freely choose their crops.

In the medium term, regarding the rights to food, work and the environment of peasants, rural workers and indigenous peoples:

- Prioritize the support to peasant agriculture, to agrarian reform, to the demarcation of indigenous lands, the diversified production of staples for the consumption of the families to safeguard their food security and their basic needs, instead of encouraging mono-crops for energy production for export. Public policies should make use of the maximum of available resources in order to meet the needs of peasant family agriculture and to diversify agri-industrial production, instead of only benefiting the export business sector. Agrarian reform, as a precondition of a social-economic change to fight poverty in rural areas, must be resumed and expanded.
- The opportunities to market food products produced by peasant agriculture producers in medium-sized cities should be expanded through farmers' markets, in order to complement product purchases made by CONAB (National Agricultural Products Supply Company).

- Advance in the negotiations and legal procedures in an attempt to overcome the organizational and structural causes of overexploitation of workers, such as payment by productivity, trying particularly to find alternatives to this mode of production throughout the whole sugar-alcohol production chain.
- Adopt public policies to improve the living conditions and work opportunities in the areas migrant workers come from, for example, effective agrarian reform, strong support to peasant agriculture, improvement of education and vocational training, information on opportunities and working conditions in other areas of Brazil, among others.
- Adopt, at the city, state and federal levels, land use planning regulations that prioritize the democratization of access to land and the implementation of agrarian reform, protect and foster peasant family agriculture, protect indigenous lands and the territories of traditional communities, protect natural resources, clearly demarcating the areas that could be dedicated to agri-energy production. These plans should be devised with full participation of the rural population and the organizations representing them.
- Take decisive measures to advance the process of legalizing the tenure of indigenous lands in the country and make national regulations fit international parameters and constitutional norms on the rights of indigenous peoples.
- Subject the granting of public incentives for the agri-energy sector, especially those granted by BNDES (National Bank for Social and Economic Development) to social, environmental and labour criteria for investments. These should, moreover, be part of clauses in contracts. For example, BNDES should ensure, before approving funding, that the requesting company is not listed in the register of labour law violators of the Department for Labour Inspection. Considering the human rights obligations of an extra-territorial nature of the Brazilian State, these criteria should also be applied in the case of incentive to projects abroad, to prevent Brazilian public resources from contributing to violations of human rights in other countries.
- Effectively regulate the sugar-alcohol industry to make sure that their actions do not affect the enjoyment of human rights by the most marginalized population and that they, instead, result in actual benefit to the whole society.
- Introduce regulations to restrict and control the purchase of land by foreign companies, setting limits to land and territory concentration.
- Rigorously enforce the environmental law to protect the environment as the “asset of common use”, protecting forests, rivers, springs and the biodiversity of the *Cerrado*, the Amazon, the *Pantanal*, the Atlantic Forest, as well as to protect against the

harmful effects of illegal spraying of pesticides that affect the crops of family farmers and poisons people in areas close to sugar cane and soybean plantations, in addition to protecting the rural workers in these units.

- Review the current energy policy so that it is compatible with the enjoyment of all human rights. Safeguard broad participation of people in the establishment of priorities so that the latter meet their social needs and are in agreement with local and regional characteristics and potentials, exploring alternatives of decentralized and non-concentrated production and management under the control of peasants and workers.

To contribute to the exercise of human rights of Brazilian citizens, the Mission recommends that other States of the international community, particularly those responsible for actions of multilateral organizations:

- Reconsider all incentive policies, such as the mandatory targets of replacing fossil fuels with agrofuels, considering the serious negative social and environmental impacts the expansion of this industry will have on Brazil as a leading country in this sector.

1. Introduction

1.1. THE MISSION'S NATURE AND OBJECTIVES

A Fact-finding Mission was conducted in Brazil from April 3rd to 10th 2008 to investigate, from a human rights perspective, the current impacts of the Brazilian government's policies and programs related to the production of agrofuels. The mission included the participation of the following human rights and cooperation organizations:

FIAN (*Food First Information & Action Network*), an international human rights organization working for the right to food. FIAN was founded in 1986, has consultative status with the United Nations and members in over 50 countries. FIAN's objective is to help to ensure that International Covenants on Human Rights are complied with all over the world. In particular, FIAN works for the exercise of the human right to feed oneself of groups threatened by hunger and malnutrition. FIAN's International Secretariat is in Heidelberg, Germany.

MISEREOR is the Organization of the German Catholic Bishops for Development Aid, with a long tradition in cooperation with organizations of Brazilian civil society, such as the church, human rights groups, peasants, indigenous movements and others. The cooperation focus is on support for the defence of human rights, sustainable rural development and improvement of the health conditions of the marginalized poor and the rural population. This cooperation is designed to overcome historical discrimination against peasants, indigenous peoples and other marginalized poor, aiming at achieving equity, integration and respect for human rights. In this regard, Misereor considers that the poor should play the role of protagonists. Misereor has consultative status with the United Nations.

The Church Development Service (Evangelischer Entwicklungsdienst - EED) is an organization of the Protestant Churches in Germany. By means of financial contributions, personnel involvement, scholarships and consultancy services, EED supports the development work of churches, Christian and secular organizations. In this worldwide partnership, EED is participating in establishing a fair society. It takes and promotes action to arouse and enhance people's willingness to stand up to overcome need, poverty, persecution and violence.

Bread for the World is an aid organization of the regional Protestant churches and the free churches of Germany. It was founded in 1959 in Berlin. In cooperation with local churches and organizations, it provides support to self-help in more than 1,000 projects in Africa, Asia, Latin America and Eastern Europe. Everyone has the right to a decent life without hunger or poverty. Considering the global economic integration, interventions to defend the rights of the poor become increasingly important for Bread for the World.

ICCO is the inter-church organization for development cooperation. ICCO's mission is to work towards a world

where poverty and injustice are no longer present. ICCO gives financial support and advice to local organizations and networks across the globe that are committed to providing access to basic social services, bringing about fair economic development and promoting peace and democracy. ICCO is active in countries in Africa and the Middle East, in Asia and the Pacific, in Latin America and the Caribbean, and in Central and Eastern Europe.

HEKS is the aid agency of the Swiss Federation of Protestant Churches and a part of the international ecumenical network for development, human rights and emergency aid. HEKS operates in Switzerland and is engaged in over 40 countries all over the world. In 22 key countries HEKS/EPER is present with its own coordination offices.

FIAN Netherlands was founded in April 2007 as a Dutch section of FIAN-International and has been working since on the impact of agrofuel expansion on the right to food.

Additionally, the Mission included delegates from the Network of Small Farmers in Western Africa (ROPPA) and the Colombian human rights organization *Corporación Colectivo de Abogados "José Alvear Restrepo"* as well as independent experts (see appendix 1).

The Fact-finding Mission was conducted at the request of organizations of Brazilian civil society and its main purposes were the following:

1. Make an on site check of the impacts of the massive territorial expansion of monoculture for the production of agro-energy in three different regions of Brazil considering the local availability of food, availability of land for land reform, conflicts over land, labour conditions and environmental impacts.
2. Document the key role of the Brazilian State (legal framework, financial support in public funding, support infrastructure, multilateral negotiations and, particularly, the political support to the agribusiness) in promoting agrofuels, both domestically and internationally, and assess this role from the perspective of the human rights obligations assumed by the Brazilian State.

The Mission's final report will be presented in relevant international forums, such as the EU, the FAO and the UN in order to demand the effective protection of the human right to food.

The Brazilian government has stood out internationally for advocating the use of agrofuels, presenting them as one of the solutions for the energy crisis resulting from the increasing scarcity of fossil fuels, as a potential answer to the climate problems of the earth and also as an opportunity to fight hunger in poor countries. The Permanent Representative of Brazil to FAO, ambassador José Antônio Marcondes Carvalho, in his speech at the regional FAO Conference in Brasília, in April 2008, said: "Bioenergy is the intersection of three of the major challenges facing us today – energy

security, climate change and fight against hunger and poverty. The objective is to try to find a balance between the three elements of this equation, i.e. producing energy and food, guaranteeing rural development and environmental and biodiversity protection.” The Brazilian government has also insisted that the massive use of agricultural products for fuel production does not affect food production in Brazil or lead to higher food prices and that, therefore, it does not represent any risk to the right to food or to food security, in addition to not representing an environmental threat. Actually, the massive production of agro-energy is considered by Brazilian government officials as an “instrument to fight poverty”. Still, in the words of Ambassador Carvalho, “Biofuel programs could represent an opportunity for family agriculture, with greater access to markets and the integration of small farmers into the production chain, guaranteeing more income.” According to the Brazilian government, it was in this spirit that Brazil recently established the National Biodiesel Program. Additionally, Brazil was the first country to foster a broad program for the development and large scale use of a fuel derived from agricultural products, namely, ethanol made from sugar cane. Additionally, as is widely known, President Lula da Silva’s government has declared the fight against hunger as the number one priority of his administration and has explicitly included structural reforms, in particular land reform and the strengthening of peasant family agriculture, as key reforms for the achievement of these goals.

On the other hand, our partner organizations in Brazil have been warning us about the negative consequences of the policies for the promotion of agrofuels regarding the exercise of the human rights to food, work, health and the environment, particularly of peasant communities, of traditional peoples and rural workers. The accelerated expansion of crops of agricultural products for fuel production, encouraged by public policies and resources, has contributed to worsen land concentration, displacement of food production, excessive exploitation of workers, destruction of forests, environmental contamination, in addition to emptying and twisting policies designed to guarantee human rights, such as the land reform, demarcation of lands of indigenous peoples and support to peasant agriculture. Brazilian organizations are not alone in this analysis. Several international organizations and experts have underlined the possible risks and negative impacts of an accelerated expansion of agrofuel production, especially on the right to food, food security and food sovereignty. Others still, question the real benefits, in environmental and energy terms, of this type of fuel.

The Mission focused its fact-finding efforts on the production chains of ethanol and biodiesel. Therefore, this report will not discuss the issue of energy derived from planted forests, especially eucalyptus plantations, which is also part of this context and has similar impacts in Brazil. Additionally, this report will not deal with issues related to energy efficiency or the environmental advantages of biodiesel or ethanol as such.

The Fact-finding Mission to Brazil aimed at collecting information to assess whether the Brazilian State is complying with its obligations related to international human rights law assumed with the ratification of human rights treaties, particularly the International Covenant on Economic, Social and Cultural Rights (ICESCR) and other treaties and international conventions dealing with the right to adequate food, work and the environment. The members of the Mission visited three different areas with different problems: in São Paulo, the Mission became acquainted with the effects of the massive production and expansion of sugar cane plantations for ethanol production on working conditions and the environment. The Mission talked with union organizations that represent workers of the sugar-alcohol industry, with non-governmental organizations and government officials and visited land reform settlements to see how the expansion of sugar cane plantation is rendering their production methods and way of life vulnerable. In Mato Grosso do Sul state, in the municipality of Dourados, the Mission examined the impacts of the unchecked expansion of sugar cane production on the Guarani Kaiowá indigenous people, particularly the way it affects their right to food, land and the environment. Additionally, it also checked the labour conditions of indigenous workers in sugar cane cutting. Finally, a team of the Mission also went to the state of Piauí, to the town of Canto do Buriti, to visit the biodiesel production project at the Santa Clara farm involving settled families and the company *Brasil Ecodiesel*. The Mission was able to talk to settled families, unions, NGOs and government officials about the development of the project and existing problems.

The members of the Mission also had a chance to meet social and human rights organizations, which provided them with valuable information, contributing, through their own analyses, to a deeper understanding of the agricultural situation and the impacts of agrofuels¹. The Mission would like to acknowledge in particular the Land Pastoral Commission (CPT), FIAN Brazil, Social Network of Justice and Human Rights, *Terra de Direitos*, and the National Rapporteur on the Human Rights to Work of the Brazilian Platform for Economic, Social, Cultural and Environmental Rights (*ESCE-Rights Platform*).

On the other hand, the members of the Mission interviewed regional and federal officials, to whom they presented the reports received from the different cases. We would like to thank the officials for taking time to meet our members².

This report is comprised of five parts: the first part describes the legal framework for the exercise of the right to adequate food, to work, to self-determination, to non-discrimination and to the environment, from the point of view of international human rights obligations and from the point of view of the Brazilian constitution and national legislation. The second part

1 See Appendix 2.

2 See Appendix 2.

presents a description of the overall situation of hunger, poverty and the land use model in Brazil. The third part describes the public policies implemented by the Brazilian government related to the issues of agrofuels and the land, also discussing some trends and more general impacts indicated in several studies and surveys. We also briefly describe some social programs directly connected with or impacted by agro-energy policies. The fourth part presents a report on the cases visited by the Mission. On the basis of the cases observed, the fifth part analyzes whether the Brazilian State is complying with its human rights obligations and whether public policies and their implementation contribute to or harm the enjoyment of human rights both in the cases discussed and in general. Finally, the report makes a number of recommendations to different levels of the Brazilian State and to other states and organizations of the international community with a view to guaranteeing human rights, especially those of the Brazilian rural communities.

2. General information

2.1. LEGAL FRAMEWORK

2.1.1. International obligations

Brazil has ratified the main treaties and international instruments on human rights, among them the Universal Declaration of Human Rights – UDHR, the International Covenant on Economic, Social and Cultural Rights – ICESCR (ratified without reservations in 1992) and the International Covenant on Civil and Political Rights – ICCPR (also ratified in 1992), the Convention on the Elimination of All Forms of Racial Discrimination (ratified in 1966), the Convention on the Rights of the Child (ratified in 1990), various ILO Conventions and, at the regional level, the American Convention on Human Rights (1992) and the Additional Protocol to the American Convention on Human Rights in the area of Economic, Social and Cultural Rights (1995).³

2.1.1.1. The right to adequate food

Article 25 of the UDHR⁴ and article 11 of the ICESCR⁵

³ The Brazilian Federal Constitution of 1988 has incorporated all the principles of the Universal Declaration of Human Rights. Consequently, the human rights principles in force in the Brazilian legal system have been only recently drafted, having been incorporated at a time when democratic order was re-established. The problem is that the very text of the Brazilian constitution has subjected the implementation of these rights to regulatory laws, which are very slow in their implementation.

⁴ Art. 25. UDHR: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care..."

⁵ Art. 11. ICESCR: 1. "The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will recognize the essential role of international cooperation and fulfil their commitment to act, either jointly or alone, to achieve the full realization of the right to adequate food. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent".

2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international cooperation, the measures, including specific programs, which are needed: a) To

enshrine the right of everyone to an adequate standard of living, including food. Article 11 of the ICESCR recognizes the fundamental rights of everyone to be free from hunger and obliges the signatories to adopt concrete measures and programs to achieve this goal.

The Committee on Economic, Social and Cultural Rights (CESCR) of the United Nations, the organization in charge of monitoring compliance with the ICESCR, presented in its General Comment (GC) 12 of 1999 on the Right to Adequate Food, a detailed and authoritative interpretation of the international law provisions contained in the Covenant. The Comment highlights, in paragraphs 1 and 2 on article 11 of the ICESCR, the following normative content: "The right to adequate food is realized when every man, woman and child, either alone or with others, has continuous physical and economic access to adequate food or to the means to its acquisition." The essential content of the right to food is the following: "The availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture; and the accessibility to such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights" (GC 12, 8).

"Availability refers to the possibilities for feeding oneself directly from productive land or other natural resources, or for well functioning distribution, processing and market systems that can move food from its site of production to where it is needed in accordance with demand" (GC, 12, 12).

The accessibility of food encompasses both economic and physical accessibility: Economic accessibility implies that the costs associated with the acquisition of food for a given diet should be at a level such that the satisfaction of other basic needs is not threatened. Socially vulnerable groups, such as landless persons and other particularly impoverished segments of the population, may need attention through special programs. Physical accessibility means that adequate food should be accessible to all, including physically vulnerable individuals, people living in high risk areas, or other particularly disadvantaged groups, such as many indigenous groups, whose access to their ancestral lands may be threatened (cf. GC 12, 13).

GC 12 summarizes in paragraphs 14-20 the obligations to and violations of the human right to food. Regarding the nature of the obligations, the Comment stipulates the following:

"The nature of the legal obligations of States parties is set out in article 2 of the Covenant and has been dealt with in the Committee's General Comment No. 3 (1990). The principal obligation is to take steps to

improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources."

achieve progressively the full realization of the right to adequate food. This imposes an obligation to move as expeditiously as possible towards that goal. Every State is obliged to ensure for everyone under its jurisdiction access to the minimum essential food which is sufficient, nutritionally adequate and safe, to ensure their freedom from hunger" (GC 12, par. 14).

The right to adequate food, like any other human right, imposes three types or levels of obligations on States parties: the obligations to respect, to protect and to fulfil. In turn, the obligation to fulfil incorporates both an obligation to facilitate and an obligation to provide. The obligation to respect existing access to adequate food requires States parties not to take any measures that result in preventing such access. The obligation to protect requires measures by the State to ensure that enterprises or individuals do not deprive other individuals of their access to adequate food. The obligation to fulfil (facilitate) means that the State must pro-actively engage in activities intended to strengthen people's access to and utilization of resources and means to ensure their livelihood, including food security. Finally, whenever an individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal, States have the obligation to fulfil (provide) that right directly. This obligation also applies for persons who are victims of natural or other disasters (cf. GC 12, par. 15).

Being aware of the differing contexts and situations, the CESCR highlights the need for each State party to take whatever steps are necessary to ensure that everyone is free from hunger and can enjoy the right to adequate food. This will require the adoption of a national strategy to ensure the right to food that formulates policies and corresponding benchmarks and that also identifies the resources available to meet the objectives and the most cost-effective way of using them (cf. GC 12, 21). Paragraph 26 of GC 12 states that this strategy should give particular attention to the need to prevent discrimination in access to food or resources for food. This should include guarantees of full and equal access to economic resources, particularly for women, including the right to inheritance and the ownership of land and other property, credit, natural resources and appropriate technology; measures to respect and protect self-employment and work which provides remuneration ensuring a decent living for wage earners and their families and maintaining registries on rights to land (including forests).

The Covenant's States parties should also take steps to respect the enjoyment of the right to food in other countries, refraining from implementing measures that endanger access to food in other countries (paragraphs 36 and 37).

It is worth highlighting that the obligation to realize the right to food does not lie only on States parties to the ICESCR but includes international financial institutions. In this regard, paragraph 41 of General Comment 12 stipulates the following:

"The international financial institutions, notably the International Monetary Fund (IMF) and the World Bank, should pay greater attention to the protection of the right to food in their lending policies and credit agreements and in international measures to deal with the debt crisis."

As we can see, access to land is a key element of the right to food⁶. General Comment 12 underlines that access to food depends on access to income or on access to productive resources, such as land. According to the Comment, special attention should be paid to especially vulnerable groups such as the landless people. The Comment asks for guarantees of full and equal access to economic resources, particularly for women, including the right to inheritance and the ownership of land and other property, credit, natural resources and appropriate technology.

Due to the close relationship between the right to food and access to land, particularly in rural areas, where a large number of people suffer from hunger, the States parties to the ICESCR are obliged to respect, protect and fulfill access to land. This obligation to fulfil, in particular, implies the implementation of a land reform program that enables landless communities to have access to the land and to other productive resources. In order to achieve this objective, States parties should formulate land reform policies and the corresponding measures for their implementation, in addition to using their resources to the maximum, as stipulated in article 2 of the ICESCR.

As a State party to the ICESCR, Brazil is obliged to regularly present a report on the realization of Economic, Social and Cultural Rights. The last report was presented in 2001 and examined by the CESCR in its session in May 2003. In its Concluding Observations⁷, the CESCR recognizes a number of advances and positive developments but, at the same time, was concerned with the persistent and extreme inequalities and the social injustice prevailing in the country. The Committee was concerned, among other things, about the persistence of forced labour in Brazil, which is often close to slavery, particularly in rural areas; the high concentration of land in the hands of a minority, and its negative effects on the equitable distribution of wealth; the killing of landless farmers and the members of trade unions defending them and the impunity enjoyed by those responsible for committing these crimes.⁸

6 See Report of the Special UN Rapporteur on the Right to Food for the UN General Assembly, 2002, A/57/356.

7 See Doc. UN E/C.12/1/Add.87. (Concluding Observations/Comments)

8 Among the main recommendations by the CESCR are the following: Adopt immediate remedial action to reduce the persistent and extreme inequalities and imbalances in the distribution of resources and income and access to basic services among various geographical regions, states and municipalities, including speeding up the process of agrarian reform and of granting land titles. Implement its National Plan for the Eradication of Slave Labour and to undertake urgent measures in this regard, especially through the imposition of effective penalties. Take legal action against those who are responsible for committing crimes against landless farmers and members of trade unions and to take effective and urgent measures to ensure protection to all farmers who are members of trade unions. Undertake appropriate measures to ensure effective realization of the agrarian reform. Improve its human rights training programs in such a way as to ensure better knowledge, awareness and application of the Covenant and other international human rights

The Food and Agriculture Organization of the United Nations – FAO – approved in 2004 the Voluntary Guidelines to support the progressive realization of the right to adequate food (FAO, 2004). To achieve this objective, States are urged to adopt the measures needed to improve the functioning of and access to the agricultural and food markets that benefit particularly disadvantaged groups (Guideline 4), access to resources and assets by vulnerable populations (Guideline 8), work opportunities (Guideline 8A), security of land tenure, especially with respect to women, the poor and disadvantaged segments of society (Guideline 8B), protection of ecological sustainability and the carrying capacity of ecosystems (Guideline 8E).

The former UN Special Rapporteur on the Right to Food, Mr. Jean Ziegler, stated in April 2008 that the mass production of biofuels represents a “crime against humanity” because of its impact on food prices (*Folha Online*, 2008). In 2007, in his provisional report⁹ to the United Nations Assembly, Mr. Ziegler had also warned that the rapid increase in agrofuel production has the potential of threatening the realization of the right to food. According to him, turning food into fuel can have disastrous consequences and he considered it unacceptable that an increase in agrofuel production could lead to an increase in hunger. Even taking into account that an increase in agrofuel production could be beneficial in environmental terms and contribute to improve food security, he said that “the main risk is that the dependence on the agro-industrial production model may not benefit small poor farmers and may cause violations of the right to food.” The UN rapporteur highlighted some additional risks: (1) the probable increase in food prices that could threaten the economic access to sufficient food, particularly for the poorest; (b) increase in disputes over land and forests and an increase in land conflicts; (c) poor working conditions and increased unemployment; (d) increases in the price of water and water scarcity. Considering these risks, the UN rapporteur defended a five year world moratorium of the expansion of the current methods of agrofuel production until all its effects have been examined and the respective regulatory structures have been established. Additionally, Mr. Ziegler proposed the adoption of a number of measures to ensure the positive impact of agrofuel production on the right to food: (a) reduction in energy consumption and improvement in energy efficiency; (b) migration to “second generation” agrofuels to reduce the competition between food and fuel; (c) adoption of technologies that use non-food crops for fuel production; (d) agrofuel production based mainly on peasant family agriculture and not on industrial agriculture models.

instruments, in particular among the judiciary and other actors responsible for the implementation of the Covenant. Take into account the obligations under the Covenant in all aspects of its negotiations with the international financial institutions to ensure the enjoyment of economic, social and cultural rights, particularly by the most disadvantaged and marginalized groups.

9 See Doc. ONU: A/62/289. See also final report: A/HRC/7/5 (January 10, 2008).

2.1.1.2. The right to work

The human right to work is enshrined in articles 23 and 24 of the UDHR, articles 6 to 8 of the ICESCR, as well as in several ILO conventions¹⁰ and in articles 6 to 8 of the ADRDM. This right shall be realized under fair conditions that ensure

- (a) a remuneration¹¹ that provides the worker and his/her family, as a minimum, with an existence worthy of human dignity, including equal salary and equal remuneration for equal work, without any discrimination, paid in cash or in a form convenient to workers, at regular intervals;
- (b) a reasonable limitation of working hours¹²;
- (c) abolition of slavery or servitude or forced or compulsory labour¹³ and of child labour¹⁴;
- (d) health and safety conditions¹⁵.
- (e) freedom of association and right to collective bargaining¹⁶.

According to General Comment 18 (GC 18) of the CESCR, which clarifies the normative content of the

10 ILO Conventions enshrine true “Labour Human Rights” (Pereira, 2007, p. 36).

11 UDHR, art. 23 (3): “Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity (...).”

ICESCR, art. 7: “The States Parties to the present Covenant recognize the right of everyone to the enjoyment of just and favourable conditions of work which ensure, in particular: a) Remuneration which provides all workers, as a minimum, with: i) Fair wages and equal remuneration for work of equal value without distinction of any kind, in particular women being guaranteed conditions of work not inferior to those enjoyed by men, with equal pay for equal work; ii) A decent living for themselves and their families (...).”

ILO Convention 95 on the protection of wages (ratified by Brazil in 1957) stipulates in article 3 (1): “Wages payable in money shall be paid only in legal tender”; article 12: “Wages shall be paid regularly (...).”

PADHDESC art. 7 (a): “Remuneration which provides all workers, as a minimum, with decent living for themselves and their families and fair wages and equal remuneration for work of equal value without distinction of any kind”.

12 UDHR, art. 24; ICESCR, art. 7 (d); DADDH, art. 7 (g). Labour Prosecutor Cícero Rufino Pereira (2007, p. 68ff) defines the limits of working hours as a “labour human right”.

13 UDHR, art. 4: “No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.”

ICCPR, article 8: “1. No one shall be held in slavery; slavery and the slave-trade in all their forms shall be prohibited. 2. No one shall be held in servitude. 3. a) No one shall be required to perform forced or compulsory labour (...).”

ILO Convention 29 on Forced Labour (adopted in 1930, ratified by Brazil in 1957) stipulates that the States that ratified it are obliged to “to suppress the use of forced labour in all its forms within the shortest possible”. In article 2, item 1, the Convention defines forced labour as “all work or service which is demanded from any person under the menace of any penalty and for which the said person has not offered himself voluntarily”. Due to the persistence of the problem, ILO adopted in 1957 the Convention 105 on the Abolition of Forced Labour (ratified by Brazil in 1965) that stipulates in article 2: “Each Member of the International Labour Organization which ratifies this Convention undertakes to take effective measures to secure the immediate and complete abolition of forced or compulsory labour (...).” ACHR, article 6: “Freedom from slavery. Article 1: No one shall be subject to slavery or to involuntary servitude (...). Article 2: No one shall be required to perform forced or compulsory labour. (...)”

14 ICESCR, article 10 (3); CDC, article 32: “1. States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.” In accordance with ILO Convention 138 on the minimum age (ratified by Brazil in 2001), the States have undertaken to “pursue a national policy designed to ensure the effective abolition of child labour and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons”. ILO Convention 182 on the worst forms of child labour (ratified by Brazil in 2000).

15 ICESCR 7 (b); ILO Convention 155 on workers' health and safety (ratified by Brazil in 1992); ILO Convention 161 on occupational health services (ratified by Brazil in 1990). It is worth stressing that in 1965 Brazil also ratified Convention 110 concerning conditions of employment of plantation workers, which it denounced, however, in 1970. ILO Convention 184 on health and safety in agriculture has not been ratified by Brazil yet.

16 UDHR, article 23 (4); ICESCR, article 8; ICCPR, article 22; ILO Convention 98 (ratified by Brazil in 1952) on the right to organize and collective bargaining; ILO Convention 141 (ratified by Brazil in 1994) on rural workers organizations.

right to work (article 6-8 of the ICESCR), the right to work is essential for the realization of other human rights and constitutes an inseparable and inherent part of human dignity. Everyone has the right to work in order to be able to live with dignity. The right to work is also important for the survival of the individual and their family and, provided the work is freely chosen and accepted, it also contributes to their full realization and recognition in the community.

2.1.1.3. The right to self-determination and non-discrimination

ILO Convention 169 on Indigenous and Tribal Peoples, ratified by Brazil in 2002, is an important instrument for the protection of the rights of indigenous peoples. Article 3 (1) provides that: "Indigenous and tribal peoples shall enjoy the full measure of human rights and fundamental freedoms without hindrance or discrimination. The provisions of the Convention shall be applied without discrimination to male and female members of these peoples." According to article 14, governments shall take steps as necessary to identify the lands which the peoples concerned traditionally occupy or to which they have had access for their traditional and livelihood activities, and to recognize and guarantee effective protection of their rights to ownership and possession of these lands. The relocation of these indigenous peoples, according to article 16, shall take place only with their free and informed consent. Regarding work, article 20¹⁷ provides that governments shall, within the framework of national laws and regulations and in co-operation with the peoples concerned, adopt measures to ensure the effective protection with regard to recruitment and conditions of employment of workers belonging to these peoples, to the extent that they are not effectively protected by laws applicable to workers in general. The Brazilian State has also supported the United Nations

17 Article 20:

1. Governments shall, within the framework of national laws and regulations, and in co-operation with the peoples concerned, adopt special measures to ensure the effective protection with regard to recruitment and conditions of employment of workers belonging to these peoples, to the extent that they are not effectively protected by laws applicable to workers in general.

2. Governments shall do everything possible to prevent any discrimination between workers belonging to the peoples concerned and other workers, in particular as regards:

a) admission to employment, including skilled employment, as well as measures for promotion and advancement;
b) equal remuneration for work of equal value;
c) medical and social assistance, occupational safety and health, all social security benefits and any other occupationally related benefits, and housing;
d) the right of association and freedom for all lawful trade union activities, and the right to conclude collective agreements with employers or employers' organizations.

3. The measures taken shall include measures to ensure:

a) that workers belonging to the peoples concerned, including seasonal, casual and migrant workers in agricultural and other employment, as well as those employed by labour contractors, enjoy the protection afforded by national law and practice to other such workers in the same sectors, and that they are fully informed of their rights under labour legislation and of the means of redress available to them;
b) that workers belonging to these peoples are not subjected to working conditions hazardous to their health, in particular through exposure to pesticides or other toxic substances;
c) that workers belonging to these peoples are not subjected to coercive recruitment systems, including bonded labour and other forms of debt servitude;
d) that workers belonging to these peoples enjoy equal opportunities and equal treatment in employment for men and women, and protection from sexual harassment.

4. Particular attention shall be paid to the establishment of adequate labour inspection services in areas where workers belonging to the peoples concerned undertake wage employment, in order to ensure compliance with the provisions of this Part of this Convention.

Declaration on the Rights of Indigenous Peoples (approved by the UN General Assembly on 09/13/2007), which provides a set of minimum standards for the survival, dignity and well-being of indigenous peoples, among which we highlight the indigenous peoples' right to self-determination (article 3) and legal protection of their lands, territories and resources (article 26) and their right to enjoy fully all rights established under the applicable international and domestic labour law (article 17)¹⁸. In article 2, the document emphatically affirms the principle of non-discrimination which will be discussed below: "Indigenous peoples and individuals are free and equal to all other peoples and individuals and have the right to be free from any kind of discrimination, in the exercise of their rights, in particular that based on their indigenous origin or identity."

International treaties and conventions enshrine the principle of non-discrimination as to race, colour, gender, language, religion, political or other opinion, national or social origin, economic status, birth or other status¹⁹. In addition to the ICESCR, the ICCPR and the International Convention on the Elimination of All Forms of Racial Discrimination, Brazil ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1984, CEDAW stipulates in article 14 that "(...) States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right: (...) To have access to agricultural credit and loans, marketing facilities, appropriate technology and equal treatment in land and agrarian reform as well as in land resettlement schemes." ILO Convention 111 on Discrimination in Respect of Employment and Occupation, ratified by the Brazilian State in 1965, provides in article 2 that "Each Member for which this Convention is in force undertakes to declare and pursue a national policy designed to promote, by methods appropriate to national conditions and practice, equality of opportunity and treatment in respect of employment and occupation, with a view to eliminating any discrimination in respect thereof."²⁰

18 Article 17: 1. Indigenous individuals and peoples have the right to enjoy fully all rights established under applicable international and domestic labour law.

2. States shall in consultation and cooperation with indigenous peoples take specific measures to protect indigenous children from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development, taking into account their special vulnerability and the importance of education for their empowerment.

3. Indigenous individuals have the right not to be subjected to any discriminatory conditions of labour and, inter alia, forced employment or salary.

19 ICESCR, article 2 (2), 3 and 7 (a); UDHR, article 23 (2); ICCPR, article 2;

20 The Convention defines "discrimination" in article 2: "a) Any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation; (b) Such other distinction, exclusion or preference which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation (...)."

2.1.1.5. The right to the environment

Article 12 of the ICESCR, the Convention on Biological Diversity (ratified by Brazil in 1994), confirmed and supplemented by the Rio Declaration on the Environment and Development (1992), the Stockholm Convention on Persistent Organic Pollutants (ratified by Brazil in 2004), enshrine a set of standards to be followed by the States Parties for the realization of the right to a clean environment.

2.1.2. National obligations

2.1.2.1. Status of the treaties and conventions on human rights in the national legal framework

Article 5 of the Brazilian Federal Constitution establishes the following: "Paragraph 1 – The norms establishing the fundamental rights and guarantees should be immediately implemented." "Paragraph 2 – The rights and guarantees expressed in this Constitution do not exclude other rights and guarantees arising from the regime and principles adopted in it or from international treaties that the Federative Republic of Brazil is a party to. Paragraph 3 – The international treaties and conventions on human rights that are approved in each of the Houses of the National Congress, in two turns, by three fifths of the votes of their respective members shall be considered to have equal value as constitutional amendments."²¹ Treaties and conventions on human rights have constitutional status in the national legal framework and should be immediately implemented.

2.1.2.2. The national law

Article 3 of the Federal Constitution enshrines as fundamental objectives of the Federative Republic of Brazil:

- I – build a free, fair society based on solidarity;
- II – ensure national development;
- III – eliminate poverty and marginalization and reduce social and regional inequalities;
- IV – promote everyone's well-being, without prejudices on the basis of origin, race, sex, colour, age or any other form of discrimination.

Articles 6 and 11 of the Federal Constitution are devoted to social rights, considered as non-amendable clauses of the constitutional text.

21 Paragraph 3 of article 5 was introduced into the Brazilian Federal Constitution by the 45th Amendment to the Constitution, from December 30, 2004. According to legal expert Flávia Piovesan (2006, p. 88-89), "with the advent of paragraph 3 of article 5, two categories of international treaties on the protection of human rights emerge: a) the materially constitutional treaties and b) the materially and formally constitutional treaties. It should be stressed that this refers to all international treaties on human rights that are not materially constitutional, due to paragraph 2 of article 5. But in addition to being materially constitutional they may, on the basis of paragraph 3 of the same provision, also embody the quality of being formally constitutional, being formally at the same level of amendments to the Constitution. (...) Whereas the materially constitutional treaties can be subject to denouncing, those that are materially and formally constitutional cannot be denounced."

Finally, it should be underlined that Brazilian law provides a legal framework that ensures the realization of the aforementioned human rights.

a) The Brazilian Federal Constitution of 1988 establishes the *principle of the social function of property* (subsection 23 of article 5), which constitutes the most relevant legal foundation for land reform. Article 184²² of the Constitution establishes that the federal government should be in charge of expropriating lands that do not fulfil a social role and make them available for land reform. Article 186 specifies that "the social role is fulfilled when the rural property simultaneously meets, in accordance with criteria and demands established by law, the following requirements:

- I – rational and adequate use;
- II – adequate use of the natural resources available and preservation of the environment;
- III – compliance with the provisions regulating labour relationships;
- IV – land use that favours the well-being of land owners and workers.

b) Law 11.346 of 2006 established the National System for Food and Nutritional Security (SISAN), "through which the public power, with the participation of organized civil society, shall formulate and implement policies, plans, programs and actions intended to ensure the human right to adequate food (article 1)", the National Conference on Food Security, to be held every four years, regulated the National Council on Food and Nutritional Security (CONSEA) and the Interministerial Chamber on Food and Nutritional Security²³. CONSEA and the Chamber have not been regulated yet and for this reason the latter has not made any progress in its role to draft the National Policy and Plan on Food

22 Art. 184: "The Federal Government should be in charge of expropriating for social purposes, to carry out land reform, a rural property that is not fulfilling its social role, through previous and fair compensation in titles of agrarian debt, with a clause of preservation of the real value, redeemable in up to twenty years, from the second year of its issuance and whose use shall be stipulated by law."

23 "Art. 2: Adequate food is a fundamental right of human beings, essential for their dignity and indispensable for the realization of the rights enshrined in the Federal Constitution, and the public power shall adopt the policies and actions needed to promote and ensure the food and nutritional security of the population. Paragraph 1: The adoption of these policies and actions shall take into account the environmental, cultural, economic, regional and social dimensions. Paragraph 2: The public power has the obligation to respect, protect, promote, provide, inform, monitor, inspect and assess the realization of the right to adequate food, as well as to ensure mechanisms for its enforcement.

Art. 3: Food and nutritional security consists of the realization of everyone's right to regular and permanent access to quality food, in sufficient quantity, without compromising the access to other basic needs, being based on dietary practices that promote health, respect cultural diversity and that are environmental, culturally, economically and socially sustainable.

Art. 4: Food and nutritional security encompasses:

- I – expansion of the conditions leading to access to food through food production, particularly by means of traditional and family farming, processing, industrialization, marketing, including international agreements, supply and distribution, including water, as well as the expansion of job creation and income redistribution;
- II – conservation of biodiversity and sustainable use of resources;
- III – promotion of people's health, nutrition and access to food, including specific groups and populations under social vulnerability;
- IV – guarantee of the biological, sanitary, nutritional and technological quality of food, as well as its use, encouraging healthy eating habits and lifestyles that respect people's ethnic, racial and cultural diversity;
- V – production of knowledge and access to information; and
- VI – implementation of sustainable and participatory public policies and strategies for food production, marketing and consumption, respecting the multiple cultural characteristics of the Country."

and Nutritional Security. Provisional Measure 132/2003 (later passed as Law 10.836/2004) established the *Bolsa Família* (Family Stipend) Program and created the Interministerial Managing Council for the *Bolsa Família* Program. This law brings together the management and implementation procedures for the income transfer actions taken by the federal government. Law 10.835/2004 (still to be regulated) established the Basic Citizenship Income that provides the right to an annual financial benefit to all Brazilians and foreigners living in the country for five years. The amount of the benefit and the implementation steps are established by the Executive.

c) As to the right to work, the Brazilian national laws ensure a broad range of rights, particularly articles 7 to 11 of the Federal Constitution and the Brazilian Labour Laws (Executive Law 5.452/1943). The Federal Constitution also enshrines the right to social security, in article 194 and to social assistance in article 203. Specifically regarding labour relationships in rural areas, Law 5.889 of 06/08/1973 establishes regulatory norms for rural labour. Additionally, labour rights in the area of health and safety, specific to rural work, have been regulated (Administrative Rule 86 of 2005, issued by the Ministry of Labour and Employment, approved the Regulating Norm on Health and Safety in Agriculture, Animal Production, Forestry, Forest Exploitation and Aquaculture – Regulating Norm 31)²⁴. The issue of outsourcing is regulated by Normative Instruction 3/97 of the Ministry of Labour and Employment, which concerns the inspection of work in contractors and temporary work companies. The recruitment of workers is governed by Normative Instruction 65/06 of the Ministry of Labour and Employment, which stipulates the procedures for the inspection of rural work. However, there are some proposed amendments to the law which, in general, could lead to impaired and more flexible labour relationships and, as a consequence, to a reduction in the protection of labour rights (ESCE-Rights Platform, 2007, p. 102).

d) Article 7, subsection IV, of the Federal Constitution provides that all urban and rural workers have the right to “a nationally unified minimum wage set by law that is capable of meeting their basic needs and those of their families such as housing, food, education, healthcare, leisure, clothing, hygiene, transportation and social security, with regular wage increases that preserve their purchasing power, and its binding for any purpose is prohibited.” According to the DIEESE, the minimum

wage needed to meet this constitutional requirement as of March 2008, considering a family consisting of two adults and two children, was R\$ 1,881.32. The current minimum wage in Brazil is R\$ 415.00.

e) The Brazilian Criminal Code defines in article 149 (amended by Law 10.803, of 2004) the crime of subjecting an individual to conditions similar to slave labour, establishing penalties for this crime²⁵. However, effective criminal actions have been curbed by the length of the penalty (2 years) and by the definition of competence to judge the crime (pending a decision by the Federal Supreme Court – extraordinary appeal 398.041). The Proposal for Constitutional Amendment 438, from 2001 (changing article 243 of the Federal Constitution) is currently being analyzed at the Brazilian National Congress. This Amendment provides for the expropriation of rural and urban properties where the exploitation of slave labour is found. Redeemed lands should then be used for the land reform program or for housing programs for low-income people.

f) Regarding the right to self-determination, the Federal Constitution recognizes, in articles 231 and 232, that “the indigenous peoples have their social organization, customs, beliefs and traditions and the original rights to the lands that they have traditionally occupied”. Law 6.001/1973, known as the Statute of Indigenous Peoples, and Decree 1.775, of 1996, stipulate the procedure for the demarcation of indigenous land, which should be performed by the Brazilian National Foundation for the Indigenous Peoples (FUNAI). Article 129, V, of the Federal Constitution/1988 stipulates that the Public Prosecutor’s Office shall be in charge of legally defending the rights and interests of the indigenous peoples.

In 2006 the Brazilian federal government established the National Commission on Policies for the Indigenous Peoples (Decree of 03/22/2006), under the Ministry of Justice, which started operating in April 2007 and is tasked with drafting a bill for the establishment of a National Council on Policies for Indigenous Peoples, in addition to proposing guidelines, instruments, norms and priorities for the national policies for indigenous peoples.

CESCR, in its concluding observations on Brazil (see ESCE-Rights Platform, 2007), pointed to failures in the protection of indigenous populations, who continue to be victims of eviction from their lands, lack of respect for the rights of indigenous peoples to land tenure, showing their concern about the permits granted to mining and

24 Item 31.3.3.1 of Regulating Norm 31 provides the following: “Companies, employers, production cooperatives or rural partners that perform joint activities or that constitute an economic group shall be responsible for the implementation of this Regulating Norm”.

According to Summary 331/TST:

I – Contracting of workers by intermediary companies is illegal, the service-taker should contract workers directly, except for temporary work (Law 6.019, of 01/03/1974).

(...)

IV – The violation of labour obligations by employers amounts to a subsidiary responsibility of the service-taker regarding these obligations, including obligations of administration agencies, quasi-governmental agencies, public foundations, public companies and private and public joint stock companies, provided they have participated in the procedural relationship and are also included in the court order (art. 71 of Law 8.666, of 06/21/1993).”

25 Article 149: “Subjecting an individual to a condition similar to slavery, subjecting them to forced labour or extremely long working hours or subjecting them to degrading work conditions by restricting, by any means, their movement due to debts incurred with the employer or intermediary:

Penalty – imprisonment, from two to eight years, and fine, in addition to the penalty corresponding to violence.

Paragraph 1: Those who commit the following acts will be subject to the same penalties:

I – restriction on the use of any means of transportation by the worker, in an attempt to keep them at the workplace;

II – heavy surveillance at the workplace or seizure of workers’ documents or personal belongings in an attempt to keep them at the workplace.

Paragraph 2: The penalty is increased by 50% if the crime is committed:

I – against children or adolescents;

II – for reasons of prejudice of race, colour, ethnicity, religion or origin.”

logging companies and other commercial interests to expropriate significant amounts of lands belonging to indigenous peoples without any kind of punishment. The Committee recommended that the Brazilian State should ensure that indigenous peoples are effectively protected against the threat and danger to their lives and against the occupation of their lands.

In 2003, Decree 4.887 regulated the procedure used to identify, recognize, delimit, demarcate and provide title deeds to the lands that are remnants of former slave settlements, pursuant to article 68 of the provisional provisions of the Federal Constitution.

g) The Federal Constitution prohibits any form of prejudice or discrimination against indigenous peoples, including in relation to labour, i.e. "in accordance with the principles that govern the Brazilian State, indigenous workers should be ensured the same protection given to all other workers, pursuant to the terms of article 7 of the Constitution and the provisions contained in the Brazilian Labour Laws" (Melo, 2007, p. 125-126). The Statute of the Indigenous Peoples (Law 6001/73), article 14, also explicitly prohibits any kind of discrimination against indigenous workers²⁶.

h) Regarding the right to non-discrimination, specifically in relation to women, article 5 of the Federal Constitution of 1988 affirms equal rights and obligations for men and women, breaking with the previous discriminatory tradition. Brazilian laws have been amended in accordance with this constitutional principle.

i) Finally, the right to an "ecologically balanced environment, an asset of shared use by the people and essential for a healthy quality of life" is provided in article 225 of the Federal Constitution (1988). Law 9.605/98 stipulates environmental crimes, administrative violations against the environment and establishes sanctions. The control of pesticides is in the hands of the public power, in accordance with the Federal Constitution, as regulated by Laws 7.802/89 and 9.782/99 on the use of pesticides in agricultural and industrial production. The Brazilian Forest Code (Law 4.771/65, amended by Provisional Measure 2.166-67/2001) provides the maintenance of an area of 80% of legal reserve in a rural property located in a forest area within the so-called "legal Amazon". A bill is currently being analyzed at the House of Representatives to amend the Brazilian Forest Code, reducing the legal reserve area in the "legal Amazon". Law 11.284, of 2006, establishes and regulates the granting of public forests for private use. Additionally, there are some state and local laws specifically related to the environmental aspects of sugarcane production²⁷.

26 Article 14: There shall be no discrimination against indigenous workers, in relation to the other workers and the former shall be ensured the same rights and guarantees of the social security labour laws.

27 The state of São Paulo, for example, has a law (11.241/2002) on the gradual elimination of sugar cane straw burning. The state of Mato Grosso do Sul enacted the Law 3.404 in 2007 regulating the implementation of alcohol and sugar mills and limiting sugar cane burning in the fields. However, pressed by mill owners, the state passed Law 152/2006 (amending State Law 328/1982), allowing the expansion of mills already installed in the Alto Paraguai river basin, i.e. allowing the expansion of mills in the Pantanal region. The municipality of Rio Verde, in the state of Goiás, decided to limit, with the supplementary Law 5.200/06, the planting

2.2. POVERTY, HUNGER AND THE AGRARIAN MODEL

Income inequality is extremely high in Brazil (IPEA, 2007, p. 14): the wealthiest 10% hold 45% of the national income; the poorest 50% hold only 14% of the total income. According to *Getúlio Vargas Foundation* (FGV) (NERI, 2007), PNDA data shows that 36,153,687 people, or 19.3% of population, were living in poverty in 2006, with an income below R\$ 125.00 a month. This is 5.8 million people less than in 2005. Between 2004 and 2006, the accumulated reduction in poverty was 36%. Taking as a basis the measure of extreme poverty used in the Millennium Goals, i.e. USD 1 a day, extreme poverty affects 4.69% of the population. The FGV also points out that in the past few years there has been an increase in income in all social classes. The greatest increase has been found in the income of the poorest (50%). This increase in income has been attributed to the reinstatement of the minimum wage, to social programs and to an increase in the number of available jobs. The GINI index of per capita income inequality reached 0.5620 in 2006 (compared to 0.5970 in 2001). According to PNAD/IBGE data (IPEA, 2006, p. 25ss), poverty is more pronounced in the Northern and North-eastern regions, amongst rural populations and the black. In 2004, the percentage of poor living in the Brazilian Northeast was 58.2% and in the North, 35.9%. Poverty affected 54.8% of the rural population. The percentage of the black population living in a situation of poverty was 41.7%, while that of the white population was 19.6%. In 1999, according to PNAD/IBGE indicators, the percentage of the indigenous population living below the poverty line was 56% and below the extreme poverty line, 22.3%. A survey carried out by the IBGE, on the basis of PNAD 2004, showed that, in that year, 74 million Brazilians (39.8%) were somehow exposed to *food insecurity*; out of those, 14 million (7.7% of the population) suffered severe food insecurity, i.e. went hungry.

The causes of poverty and hunger in Brazil are many (see Wolff, 2001; Valente, 2002). The *agrarian development model*, however, is outstanding in this respect, because it becomes a factor in the concentration of land, income and power. The Brazilian agrarian model is based on the "monoculture business-like large properties that produce for export, ideologically called agribusiness" (Porto-Gonçalves & Chuva, 2008, p. 144). This model of agrarian development has benefited only a minority of rural oligarchies, which became allies of the industrial, commercial and financial capitalists, while the vast majority of the population was evicted from the rural areas and marginalized. In the past few years, Brazilian agriculture has gone through a process of integration with international market, which progressively subjects it to the logics of large transnational corporations, making it totally dependent on their technology. Its main activity is the production of commodities for export. The

of sugar cane to 10% of each arable property in the municipality (in addition to setting limits to sugar cane burning), fearing the concentration of production and its impacts on the traditional grains and meat agro-industry in the municipality.

conservative modernization of Brazilian agriculture, with changes in its technical foundations and integration into international markets, intensifies the use of capital, expands the control over productive resources (land, water) and natural resources (seeds, forests, etc) in the hands of few big business further undermining the family-based farming economy, limiting the possibilities of a land reform and threatening the control traditional peoples have over their territories and resources.

Brazil has one of the world's highest rates of *land tenure concentration*. According to statistics of the INCRA National Register (MDA/INCRA, 2003)²⁸, for 2003, there were 4.2 million registered rural properties, occupying a total area of 420 million hectares of land. The owners of properties of more than one thousand hectares (that is, 1.7% of the total number of registered properties) owned 43.7% of the total registered area, i.e. 69,123 properties held 183 million of hectares in private hands. At the other extreme, properties of an area of up to 10 hectares accounted for 31.6% of the total number of registered properties and held only 1.8% of the total area, i.e. 1.3 million properties occupied an area of 7.6 million hectares. The GINI land property concentration index was 0.802 in 2000 (MDA, 2001). Brazilian laws do not set a maximum limit on the ownership of rural lands. In addition to concentrating large extensions of land, agribusiness also receives most agricultural credit; in terms of production, however, results show a high degree of inefficiency compared to those achieved by family agriculture. In sum, one can say that Brazilian agribusiness, as a whole, uses almost 70% of the lands, receives 80% of the agricultural credit, employs only 2.5% of the Brazilians working in rural areas and accounts for 50% of the national production, primarily commodities for the export market. On the other hand, small properties account for 85% of rural establishments, hold 30.5% of the lands, employ 87.3% of Brazilians working in rural areas and receive only 20% of the credit, producing the additional 50% of the national production, especially the staple foods consumed in the country (Vezzali, 2006).

The agrarian model has caused the *expulsion of thousands of farmers* from their lands and generated an intensive process of migration to cities and agricultural frontier areas, further deepening social inequality, fuelling conflicts in the countryside and violence against rural and indigenous populations. The expulsion of farmers serves the large agribusiness property owners a double purpose: on the one hand, it consolidates the territorial expansion through land concentration, on the other, it frees cheap labour for agricultural and industrial production. According to preliminary data from the

2006 Agricultural Census carried out by IBGE (2007), there were 16.4 million people involved in agricultural activities. In spite of the expansion of Brazilian agriculture (or because of it), the exclusion of economic active people is growing: *between 1985 and 2006, 6.9 million people left their occupation in agricultural activities*. In the past 25 years, over 30 million peasants have left rural areas in order to live on the outskirts of big cities. According to the data of the 2nd National Plan for Land Reform, the government estimates that there are *3.1 million landless families and around 3.4 million families with insufficient land* for the reproduction and livelihood of the family (MDA/INCRA, 2003).

In 1996, there were 4.9 million *rural wage earners* (56% temporary and 44% permanent), out of whom only 1.5 million have working papers. In the area of rural work, women and children are the most vulnerable groups. Female rural wage earners generally have to work double, are paid less than men and, if they are black or belong to an indigenous group, they are discriminated in relation to white women. Child labor still persists, in spite of initiatives taken by the State and civil society to fight this problem. IBGE has stated that in 2006 *1.4 million children* aged 5 to 14 years were working; 62% of them in agricultural activities.

Slave labor is one of the most brutal forms of oppression to which a significant part of the Brazilian rural population is subjected. In spite of public policies implemented to fight the practice (see 3.4.3 below), the problem persists and is worsened in the context of the current exploitation of labour. According to CPT data (2008), in 2007 there was an increase in the number of workers in slavery-like situations and an increase in the number of states involved: in 2006 there were 6,930 reports and 3,633 workers were rescued in 16 states; in 2007, there were 8,653 cases reported and 5,974 people were rescued in 18 states. The number of slave labour cases has increased in the most developed regions of the country: in the South-eastern region they increases from 8 to 14 and in the Mid-Western region from 29 to 43. According to calculations of the National Plan for the Eradication of Slave Labour by the President's Office, in Brazil there are around 25 thousand people subjected to slave labour. Ranchers and business groups are responsible for most slave labour crimes. According to government estimates, 40% of workers freed from this condition go back to slave labour due to lack of work and income opportunities (Vieira & Esterici, 2003)²⁹.

28 The INCRA Register is based on reports and its data contains inaccuracies. According to a statement made by the Ministry for Agrarian Development to the Mixed Parliamentary Inquiry Commission on Land (2004), approximately 200 million hectares of land in Brazil have not been formally identified in any register. According to existing registers, out of the 850 million hectares of the national territory, 420 million are private properties, 102 million are environmental conservation areas and 128 million are indigenous areas. The lack of information favours illegality and legal instability in the area of land tenure, stimulating illegal appropriation of public lands (land grabbing) (Mello, 2006, p. 44ss).

29 In addition to precarious and inhuman working conditions, slave labour is characterized by the restriction of freedom by different indebtedness mechanisms – payment of transportation to the workplace, food, through the use of force – armed guards, permanent intimidation, or by isolation in remote areas that prevent rural workers from leaving the place of work (Vieira & Esterici, 2003, p. 138). Slave labour, in its various forms, is not a new phenomenon and was possibly never eradicated since it was first introduced by Europeans in the colonial period. However, starting in the late 1960s, there was an increase in the prevalence of slave labour with the settlement and expansion of the agricultural frontier in the Amazon region. One can say that even today this situation remains: reports of inspections made by the Ministry of Labour and Employment in farms using slave labour show that slave labour in Brazil is the hidden face of the advance of agricultural frontiers, being found in large export-oriented agricultural enterprises (soybeans, sugar cane, cotton) and also in modern cattle farms for beef export. According to a survey by Repórter Brasil (2008), the cases of slave labour are most commonly found in agricultural frontier areas, but are not restricted to those areas; cases recorded

The amount, form and intensity of *social conflicts in rural areas* constitute the most alarming indicators of the injustice of the current agrarian model. The report *Conflicts in the Countryside – Brazil 2007*, presented annually by the Land Pastoral Commission (CPT), shows that between 1998 and 2007 there were 13,115 conflicts in rural areas of Brazil, with 384 farmers killed. Last year alone, there were 1,538 conflicts, involving 795,341 people, with 28 farmers killed. Conflicts over land (615) involved 612,000 people and an area of 8.4 million hectares. In 2007 there was a reduction of 7% in the number of conflicts vis-à-vis 2006 (except for the South-eastern region, where there was an increase). However, there was an increase in murders of farmers and increased private violence against peasants (expulsions from land and murders). Murders occurred in 14 states in 2007, compared to 8 states in 2006. The number of families evicted from lands by private agents (militias and gunmen hired by farmers) increased by 140% last year. This increase was found in all regions of Brazil. In 14 states there were records of the eviction of families and of killings in 2007, compared to only 8 states in 2006. There was an increase in the number of killings in the states of Goiás, Mato Grosso do Sul, Tocantins, Paraná, Maranhão, Bahia, Ceará and Rio Grande do Norte. There was an increase in the number of evictions of families in the states of Minas Gerais, São Paulo, Paraná, Santa Catarina, Mato Grosso do Sul, Amazonas, Pará, Maranhão, Mato Grosso, Ceará and Pernambuco. Regarding violence by the public power, through legal evictions, there was an increase in the number of cases in the South-eastern region, the most developed area of Brazil. Most states with high levels of conflict are those where the agribusiness for export is consolidated or is undergoing consolidation, such as Paraná, São Paulo, Goiás, Mato Grosso, Mato Grosso do Sul and Tocantins, or states with a strong pressure for the expansion of this agricultural model, such as the states of Rondônia, Maranhão, Roraima and Pará. In the case of private violence, geographical indicators show that this form of violence is also more intense in the states where agribusiness is consolidated (Mato Grosso do Sul, Santa Catarina, Goiás, Paraná) and in the states where an expansion of the agricultural frontier is currently taking place (Mato Grosso, Pará, Tocantins, Rondônia and Maranhão). The governmental support to the agribusiness as a generator of foreign exchange through the export of agricultural commodities is encouraging the demand for land and worsening and spreading conflicts and private violence (Porto-Gonçalves & Chuva, 2008, p. 143).

This agrarian model has also been extremely harmful to the rights of the *indigenous peoples*. The pressure by farmers for indigenous land and the constant invasions have delayed the processes of registration of indigenous lands, reduced their territories and generated conflicts

by the Ministry of Labour and Employment do not involve small farms that are economically isolated, but mainly involves large rural property owners, who make use of advanced technology to produce commodities for national and international industries and retail companies (Repórter Brasil, 2008, p. 16).

and killings of members of indigenous communities. According to CIMI (2008), killings of members of indigenous communities have increased significantly over the past few years. In 2007 there were 92 murders, a 64% increase in relation to 2006, when there were 57 cases. In the past 13 years, 436 members of indigenous communities were killed. The report also shows that there was a 395% increase in the number of individuals from indigenous communities who suffered from malnutrition: it grew from 99 people in 2006 to 491 in 2007.

The model of export oriented agriculture focused on the monocultures of soybeans, sugar cane and eucalyptus and on cattle raising has caused extensive *environmental impacts*: the devastation of biomes such as the Atlantic Forest, the *Cerrado* and the Amazon, destroying biodiversity, natural resources and the environment in general. According to data from the INPE, in 2007 *11,224 km² were deforested in the so-called "legal Amazon"*. The states with the highest deforestation rate were Pará (5,569 km²), Mato Grosso (2,476 km²) and Rondônia (1,465 km²), i.e. the agricultural frontier region. Although this data confirms a trend towards a reduction of the deforested areas in the past few years, recent data shows an acceleration of deforestation starting in the second half of 2007, which continued in the initial months of 2008, in spite of initiatives by the federal government to curb it. In the past few months, the areas where deforestation has been more intense are Mato Grosso and Pará, in the areas of soybean production and cattle-raising³⁰.

In addition to deforestation, the intensive agricultural practices adopted in Brazil require large amounts of *water*. According to the National Water Agency (ANA), despite of the fact that only 6% (3.6 million hectares) of the planted area in Brazil is irrigated, irrigation consumes 69% of the fresh water used in Brazil (Mazerotti, 2006).

Still in the environmental arena, NGOs and the trade union movement, particularly CONTAG, have been warning government officials about the problems caused to the environment and people's health by the indiscriminate use of *pesticides* in agriculture. Brazil is the third largest consumer of pesticides in the world. According to data from the National Trade Association of the Pesticide Industry (SINDAG), in 2005 *485,969 tons of commercial products and 232,232 tons of active ingredients* were sold. More than half of this amount was used for soybean crops (38.5%) and sugar cane (12.6%); São Paulo was the largest consumer (20.6%), followed by Mato Grosso (17.9%). According to data from the Ministry of Health, pesticides are the main cause of workers' health problems in most Brazilian states. The National System on Toxicological and Pharmacological Information (SINITOX), linked to the Fiocruz Foundation, recorded 5,945 cases of intoxication by pesticides for

30 According to INPE data, in the state of Mato Grosso, 639 km² were deforested in February 2008 (68% more than in the previous month), equal to 88% of the total area deforested in the Amazon, which was 725 km².

agricultural use in 2004, with 164 deaths³¹.

Finally, the authorization of *genetically modified organisms* in Brazil goes against the precautionary principle enshrined in the Cartagena Protocol on Biosafety. It represents a further step in the control over seeds by transnational corporations and expands environmental contamination with the use of herbicides such as glyphosate, classified by the WHO as “highly toxic”, due to its “carcinogenic effects, mutagenic action, food contamination and persistence in the land and in the crops” (Andrioli, 2008).

3. Governmental guidelines and programs

3.1. GUIDELINES FOR AGRO-ENERGY POLICY AND NATIONAL PLAN FOR AGRO-ENERGY

The Guidelines for Agro-energy Policy 2006-2011 (MAPA et al., 2005) were launched in 2005 by the Ministries of Agriculture (MAPA), Science and Technology (MCT), Mining and Energy (MME) and the Ministry of Development, Industry and Foreign Trade (MDIC)³² with the purpose of directing public policies and actions towards the development of renewable energy sources and the expansion of their share in the Brazilian energy matrix. According to the document, renewable energy sources account for 44% of the Brazilian energy matrix (the world average is 14%)³³. The guidelines consist of the following:

- a) Development of agro-energy through
 - expansion of the ethanol sector,
 - implementation of the biodiesel production chain,
 - expansion of forests grown for energy production (i.e. eucalyptus plantations) and
 - use of agro-forestry waste;
- b) expansion that does not affect the production of food for domestic consumption, particularly of staple food;
- c) technological development that promotes competition, reduces environmental impacts and contributes to economic and social inclusion, including the use of energy biomass in small scale;
- d) community-wide energy autonomy, particularly in more remote areas;
- e) generation of jobs and income (development

towards the interior of the country, social inclusion, reduction in regional disparities, etc);

- f) optimization of the use of anthropized areas, i.e. respect for the sustainability of production systems and discouraging the “unjustified expansion of the agricultural frontier” or the advance towards systems such as the Amazon or the *Pantanal*;
- g) Optimization of regional vocations;
- h) Brazilian leadership in the international trade of agrofuels and
- i) “adherence” to the national environmental policy and integration in the Clean Development Mechanism of the Kyoto Protocol.

The document is based on the following premises: a growing world demand for energy, which cannot be totally met by fossil sources, and high rates of energy biomass use; fuel prices will maintain the upward trend; recognition of the importance of biomass energy as an alternative for reducing dependence on oil; increasing investments in the development of biomass technologies; the growing number of international investors interested particularly in ethanol; growing concern about global climate changes that will result in global policies for pollution reduction.

The energy issue is considered strategic for Brazil and, as such, it is the duty of the State to take care of it. The document warns that special care should be taken with agro-energy because “the production process of raw material is linked to the biological cycle of the species involved and the increase in their production must respect the characteristic life cycle of the plants involved. Another important factor is related to the expansion of the production frontiers, which should respect the environmentally acceptable limits and, at the same time, minimize disturbances in the food production market” (MAPA et al., 2005).

The text also describes the factors that make Brazil today a world benchmark in agrofuel production and use: the huge production potential, decades of experience of use and the control of the production process, storage and distribution of fuels derived from biomass. The document states that Brazil has an additional arable area of 140 million hectares that are not suitable for food production and that could be used for growing oilseeds.

The State has the task of investing in infrastructure (transportation logistics), setting the regulatory framework, establishing agricultural policy instruments, facilitating access to credit for investments, fostering research and innovation in technology and integrating the various links of the production chain. Additionally, the State has the task of ensuring a balanced development of the sector, “preventing excessive production concentration, either by region or by production unit”. Public policies should ensure large scale production and, at the same time, also take into account the need to

31 According to the World Health Organization, for every reported case there are on average 50 cases that are not reported.

32 The Ministry of the Environment (MMA) and the Ministry for Agrarian Development (MDA) did not participate in the drafting of the document, which are more committed to the sustainability of government policies (Barbosa, 2007, p.3).

33 According to the document, in 2004 the Brazilian energy matrix was distributed as follows: oil and oil products (39.1%), hydroelectric power (14.4%), sugar cane products (13.5%), firewood and other biomasses (13.2%), natural gas (8.9%), coal products (6.7%), uranium (1.5%) and others (2.7%).

restructure the foundation of the production chain to ensure that small producers are competitive.

Additionally, the document outlines scenarios, strategic options and actions for the implementation of the policy, taking into account the following areas: ethanol, biodiesel, planted forests and agro-forestry waste. We will come back to these issues when we discuss the specific programs for ethanol and biodiesel.

The guidelines give special attention to the issue of environmental sustainability and social inclusion. Emphasis is put on the potential to promote sustainability that is inherent in the agro-energy production model, since it allows energy production on "environmentally adequate and socially fairer bases". To promote the social inclusion of small rural producers, the document advocates the "strengthening of the multifunctional character of family agriculture", i.e. valuing the possibilities of energy technology alternatives from small scale production which, as a rule, are "disregarded in the technology standard based on the intensive use of external inputs, particularly those related to intensive capital technologies". The document underlines: "It should be pointed out that the commoditization or self-sufficiency of biofuels will not ensure the desired social inclusion of family farmers. These approaches alone are focused only on the economic efficiency of the process, they do not take into account the essence of family agriculture, namely, its multifunctional character." Taking this character into account, public policies for biofuels should be based on:

- Economic and social sustainability (family agriculture accounts for seven out of ten jobs in the Brazilian rural areas);
- Promotion of energy independence (encourage the supply of small industrial units, providing local energy self-sufficiency to communities);
- Biodiversity conservation ("Energy production through agricultural activities focusing only on market trends can lead to monocultures in family properties, which would be a disaster for the environment and for the farmers' sustainability");
- Consideration of local potentialities;
- Participation and involvement of family farmers in the formulation, implementation and assessment of any project developed in rural communities in order to encourage the participation of these communities as protagonists and their emancipation.

The National Plan for Agro-energy 2006-2011 (MAPA, 2006) presents strategic actions to be undertaken by MAPA based on the aforementioned guidelines. The document mentions a number of advantages that qualify Brazil to lead agro-energy production and the world market for bioenergy – the "biomarket": (1) "the possibility of converting new lands for this purpose without expanding the deforested area and without reducing the area used for food production, keeping environmental impacts restricted to those socially

accepted". The document estimates, in an attached text, an additional area in Brazil that could be used to expand agro-energy crops in the order of 200 million hectares, considering the "expansion area of the *Cerrados*, the integration between cattle-raising crops, degraded pastures, reforestation areas and the currently marginalized areas – such as the North-eastern Semi-Arid Region"; (2) possibility of multiple annual crops, climate characteristics and fresh water reserves; (3) world leadership in tropical agriculture and agro-industrial technology, particularly the ethanol production chain and (4) market competition conditions.

The Plan includes the following objectives:

- Increase the share of renewable energies in the Brazilian energy matrix;
- Development at the regional level and in the interior of the country;
- Create opportunities for the expansion of jobs and income generation in agribusiness, with the participation of small producers;
- Contribute to the fulfilment of the Brazilian commitment to the Kyoto Protocol;
- Induce the establishment of the international biofuel market.

For each of the development areas included in the guidelines, the Plan foresees, among other initiatives, the implementation of Agro-ecological Zoning, with the purpose of guiding public and private investments and detecting possible environmental impacts.

The plan is basically designed to develop a research and technology transfer program in the field of agro-energy, to create EMBRAPA Agro-energy and to promote an international agrofuel market. For the creation of the international "biomarket", the plan proposes joint actions between government and the private sector, promoting visits to Brazilian agrofuel projects by representatives of foreign governments and business communities, organization of forums of producing countries, technical, economic and financial consulting to developing countries and starting the negotiations for the establishment of the International Organization of Biofuel Producers and Consumers (IOBPBio).

3.2. NATIONAL ALCOHOL PROGRAM (PROÁLCOOL)

a) Introduction

Proálcool, a program of an economic character, was established by the Brazilian government in 1975 (Decree 76.593) to reduce dependence on foreign oil at a time of significant increases in oil prices on the international market. The program initially promoted an increase in the percentage of anhydrous alcohol produced from

sugar cane³⁴ that was to be added to gasoline³⁵. Later, in a second phase (Decree 80.762/79), it promoted the use of hydrated alcohol in vehicles with motors designed specifically for this fuel. In 1985, 85% of the cars sold in Brazil were alcohol-fuelled. Alcohol production went from 600 million litres in 1975 to 12 billion litres in 1986. With the decline in oil prices and the increase in sugar prices in the 1990s, there was a collapse in alcohol supply and the program was brought into discredit.

Historically, the sugar and alcohol market in Brazil has been characterized by State intervention. The State set production quotas, prices for the sugar cane ton, for the sugar bag and alcohol litre and, as a result, it ultimately determined the profitability of the business. State intervention also defined the vertically integrated production model, centered around large alcohol and sugar mills which concentrated land and income in the hands of a "new business class that emerged subsidized by public resources: the mill owners" (Paiva & Plassat, p. 2). The Sugar and Alcohol Institute (IAA), established in 1933, was the main governmental instrument used to consolidate the transition from a decentralized sugar mill model to a model with a concentration in large industrial units. Thus, the exploration model of the sugar and alcohol agro-industry in Brazil privileged large extensions of land and monoculture plantations, supported by high levels of human labour, exploited under inhuman labour conditions. *Proálcool* followed the same logic: it encouraged, with public resources, through funding and subsidies granted to large sugar cane producers, a new process of expansion of the sugar-alcohol sector and, as a consequence, a process of land concentration. The funding was granted through the then National Bank for Economic Development (BNDE), Banco do Brasil, and through regional and state development banks. Between 1976 and 1989, public resources directed to this sector were in the order of USD 5.9 billion. The incentives given by the program led to an expansion of sugar cane production in the North-eastern Region, completing the devastation of the Atlantic Forest, and also promoted its expansion in the South-eastern and Southern regions, with social and environmental impacts that have been thoroughly studied and described (Hirsch et al., 2002). The cycle of expansion of the sector resulted in many processes of expulsion of the peasants who lived in areas of the mills. At first the evicted peasants started to lease the mill lands and then, in the 1970s, with the end of the leasing contracts, they migrated to urban areas and became temporary workers on sugar cane plantations.

From the 1990s, the market became partially deregulated

34 Alcohol represents only one third of the energy found in sugar cane. The burning of sugar cane bagasse in boilers produces steam that is used to obtain thermal, mechanical and electric energy. Straw accounts for over 50% of the energy accumulated in the sugar cane plantation and is usually lost through burning. The Program for the Incentive of Alternative Power Sources (PROINFA) includes the purchase of energy by the national interconnected power system from sources such as biomass.

35 The first research studies on fuel alcohol in Brazil were conducted between 1905 and 1925. In 1931, the Brazilian government decreed the compulsory blending of 5% alcohol with imported gasoline; in 1938, Decree 737 established the compulsory blending of 5% alcohol with gasoline produced in Brazil.

and prices freed³⁶ (Alves, 2007), opening the way for the modernization of the sector based on domestic competition and the search for lower production costs, which led mills to invest in mechanization and automation, increased work productivity and agricultural productivity. At that time, the IAA was closed. Later, its functions were transferred to the Department of Production and Agro-energy at the Ministry of Agriculture, which is currently in charge of monitoring agricultural production and regulating industrial production. In the 1990s, investments were made in transportation infrastructure and technological modernization of agriculture and industry in the Southern and South-eastern regions, forming the largest sugar cane agro-industry concentration in the world. The sugar-alcohol sector in the Brazilian Northeast was hit by a crisis caused, among other things, by higher production costs (mainly due to the rough topography which makes mechanization difficult) and by chronic indebtedness³⁷. Several mills were closed and others moved to the Mid-Southern region. Sugar and alcohol mill owners in the Northeast are still asking for the return of the subsidies, in the form of equalization quotas to compensate for the difference in cost in relation to the Mid-South region.

Currently, the sugar-alcohol industry is experiencing strong and dynamic growth. The strong recovery in alcohol production, which started in 2002, is driven by the increase in oil prices on the international market and by the introduction of the flex fuel vehicles – with alcohol and gasoline-driven motors – on the Brazilian market in 2003. The rapid expansion in flex fuel car sales increased the domestic demand for alcohol. According to ANFAVEA, 85.6% of the 2.97 million cars sold on the domestic market in 2007, were flex fuel cars. In February 2008, alcohol consumption exceeded that of gasoline in Brazil. According to estimates, by the year 2013, there will be 15 million flex fuel cars in Brazil. In

36 The liberalization of the market and the fuel taxation model were set by Law 9.478, of 08/06/97 (the law that provides the national energy policy, activities related to oil monopoly and also establishes the National Energy Policy Council and the National Oil Agency – ANP), and by the Constitutional Amendment 33, 12/11/01. Additionally, there were supplements and changes through Law 11.097/05, which introduced elements related to agrofuels, determining the increase in the share of agrofuels in the Brazilian national energy matrix, defining biofuel as "the fuel derived from renewable biomass for use in internal combustion engines or, according to the regulation, for other type of energy generation that may partially or fully replace fossil fuels" and changing the character, attributions and even the name of the ANP (which became a quasi-governmental agency called National Oil, Natural Gas and Biofuel Agency):

"Art. 8: The ANP shall promote the regulation, contracting and inspection of the economic activities conducted in the oil, natural gas and biofuel industry, being in charge of:

I – implementing, within the scope of its attributions, the national policy on oil, natural gas and biofuels, contained in the national energy policy, according to Chapter I of the present Law, with an emphasis on ensuring the supply of oil products, natural gas and its products and of biofuels throughout the national territory and protecting the interests of consumers regarding price, quality and product supply; (...)

VII – directly inspecting, or through agreements with agencies of the States or the Federal District, the activities in the oil, natural gas and biofuel industry, in addition to imposing administrative and financial penalties in accordance with laws, regulations or contracts; (...)

IX – enforce good practices of conservation and rational use of oil, natural gas, its products and biofuels and of environmental conservation."

This law also introduces biodiesel in the national energy matrix, as we will see below.

37 According to the CONTAG, in 1998 the debts of the sugar and alcohol sector with public institutions in the state of Pernambuco alone amounted to R\$ 3.3 billion.

2007, the alcohol consumption in the domestic market was 16.7 billion litres, with 3.5 billion litres exported to foreign markets. MDIC estimates that by 2012 Brazil will be exporting 7 billion litres of ethanol.

b) Current sugar cane and alcohol production

Brazil is currently the world's largest sugar cane producer. For the 2008 harvest, CONAB (2008) estimates that production will range from 607.8 to 631.5 million tons of sugar cane (in 2007 it was 558.5 million) and that around 558.1 and 579.7 million tons will be used by the sugar and alcohol industry. Around 55% of the sugar cane used by the industry will be used in alcohol production (an estimated 26.4 – 27.4 billion litres – a 14.9 to 19.4% increase in comparison with the previous harvest) and 44% in the production of a minimum of 33.8 and a maximum of 35.1 million tons of sugar (a 8.2 to 12.4% increase in relation to the previous harvest). In 2008, around 4.2 billion litres of alcohol will be exported.

In 2007, the area planted with sugar cane amounted to 6.96 million hectares (13% more than in the previous harvest, i.e. 800.4 thousand hectares). According to CONAB, the area planted with sugar cane occupies 2.8% of the 276 million hectares of arable land in the country (cattle-raising uses 72% and grain agriculture, 16.9%). In relation to the 2006 harvest, the area planted with sugar cane covered all Brazilian regions: North (8.5%), Northeast (7.4%), Mid-West (17.5%), Southeast (12.5%), South (24.1%). The Mid-Southern region expanded the area planted with sugar cane from 5.02 to 5.73 million hectares, i.e. an additional 715.7 thousand hectares. There is a strong regional concentration of this industry: 82.37% of the planted area in the 2007/2008 harvest is located in the Mid-Southern region, with 17.63% in the Northern and North-eastern region. The Mid-Southern region will concentrate 90.40% of total alcohol production (18.88 billion litres) and the Northern and North-eastern regions will account for 9.60% of the production. Average productivity is 78.9 tons/ha (2.5% above the previous harvest).

c) State incentives

Although the current expansion of the sugar and alcohol industry is marked by the "absence of direct and exclusive subsidies by the State" (Alves, 2007, p. 29), State support is still fundamental. The government provides this industry with *differentiated tax treatment*³⁸, using intervention mechanisms in the fuel alcohol market and setting levels for *alcohol blending in gasoline that range from 20 to 25%* (Law 8.723/93)³⁹ and, regarding the tax burden on *flex fuel cars and alcohol-fuelled cars, setting lower tax rates for the Manufactured Goods Tax (IPI)* (Decree 4.317/02).

38 Decree 5.060/04 reduced to zero the rate of the Economic Area Intervention Tax – CIDE (established by Law 10.336/01), levied on fuel ethylic alcohol imports and sales. The tax on gasoline is R\$ 280.00/m³.

39 Since July 1st, 2007, the percentage of alcohol blended with gasoline is 25%.

A major part of the expansion in the sugar and alcohol industry is funded by *public resources through BNDES, Banco do Brasil and other government agencies*. The BNDES (2007), which in 2007 established a Biofuel Department, announced late that year that the agrofuel industry portfolio amounted to loans of around R\$ 19.7 billion, out of which R\$ 15.4 billion were to be used for sugar cane and alcohol production, R\$ 2.3 billion for co-generation and R\$ 1.8 billion for sugar cane plantation. The largest investments made by the bank in this area are concentrated to southern Mato Grosso do Sul, southern Goiás and the far western region of Minas Gerais. BNDES is a public financial agency; 57% of its resources come from the Worker's Support Fund (FAT)⁴⁰. The bank does not apply any social and environmental clauses to its loans⁴¹.

Additionally, *Petrobras*, the Brazilian state company with foreign capital participation, also plays a key role in this area. The state-owned company controls most of the fuel production, refining and marketing in Brazil. In the case of ethanol, it purchases the product from mill owners and distributes it in the domestic market through its subsidiary company *Petrobras Distribuidora* (BR). It also works in transportation logistics through its subsidiary *Transpetro*. In its Strategic Plan for 2020 (2007), in the area of agrofuels the company set the following goal for ethanol: "Expand its operations in the ethanol business, participating in the national production chain for the development of international markets, focusing on logistics and marketing." The plan includes USD a 690 million investment in the ethanol business by 2012, primarily in pipelines and alcohol pipelines. Petrobras and the government of the state of Goiás have signed a protocol of intention to build an alcohol duct for the transportation of alcohol connecting Senador Canedo, in the state of Goiás, to the Paulínia refinery, in the state of São Paulo. The 1,100 kilometres project, with completion scheduled for 2012, is estimated to cost R\$ 2 billion (Monteiro, 2008). The Petrobras and the Japanese company Mitsui have established a partnership to build 40 ethanol mills, at a cost of 200 million each, to supply between 200 and 250 million litres of alcohol a year to Japan. The state-owned company is also assessing the possibility of building a 920 km alcohol pipeline between Campo Grande, in the state of Mato Grosso do

40 a) The FAT is a fund dedicated to funding the Unemployment Payment Program, the Wage Bonus Program and the Economic Development Programs; on 02/29/2008, the resource balance of the FAT at the BNDES System was R\$ 104.5 billion. See www.bndes.gov.br

b) According to a survey conducted by professor Francisco José da Costa Alves, foreign investors provide 20% of the capital and the remaining 80% come from the BNDES. The interest rate charged by the bank is 12% a year, the loan has a 3 years grace period (no interests paid), with 10 to 15 years for amortization. The SELIC rate is around 14% of the return on financial investments; investors use their own money in the financial market. The BNDES captures its funds at an 8% rate from the FAT, so that everyone profits from the scheme.

41 Brazilian social movements have demanded that the BNDES adopts social environmental criteria conditioning the approval of funding projects. In 2007, social movements and NGOs handed over to the president of BNDES a far-reaching document (see Friends of the Earth et al., 2007), requesting the establishment of criteria for social transparency, control and participation, social-environmental, gender, ethnicity, labour and income criteria, which should not be mere recommendations, but clauses considered before the approval of projects and part of the loan agreements. This was followed by a public debate on the issue, in which the bank's president recognized the problems and committed himself to the proposals made in the document.

Sul, and the port of Paranaguá, in the state of Paraná. The Petrobras Research Centre (CENPES) is also investing in second generation technology in the agrofuel area, specifically in ligno-celulose ethanol, a fuel made from agro-industrial waste, in this particular case adapted to sugar cane bagasse, which would significantly increase productivity.

EMBRAPA, linked to MAPA, is an agency working on agricultural technology research and transfer, with a focus on agribusiness, and played a key role in the expansion of soybean production to the Brazilian *Cerrado*. EMBRAPA Agro-energy is currently being structured, which will at first focus on research and development in the area of agrofuels, especially ethanol and oilseeds, with the goal of making EMBRAPA and Brazil world leaders in the area of agro-energy technology.

d) International promotion

The Brazilian government has also worked at the international level to promote and disseminate ethanol production and consumption.

On March 9, 2008 Brazil signed a cooperation memorandum with the USA for the development and dissemination of agrofuels (ethanol and biodiesel) at the bilateral level (research and development of the latest generation of agrofuel technology), at the third countries level (encouraging local production and consumption, starting with Central America and the Caribbean) and at the global level (expanding the agrofuel market through cooperation to set uniform standards and norms, in addition to coordinating their positions at international forums).

Encouraged by the spirit of the agreement with the USA, the Brazilian president, together with a delegation of mill owners and UNICA leaders, visited Nicaragua, Panama, Honduras, Jamaica and Mexico in August 2007 with the goal of promoting ethanol and expanding investments in mills in Central America and the Caribbean. In Jamaica, the Brazilian president opened a mill owned by JB Ethanol, and there are two additional mills being built there right now with Brazilian investments. Jamaica has passed a law that will adopt a blend of 10% alcohol in gasoline starting in 2008. Central America and the Caribbean hold a quota of 7% of the American market, amounting to around 1.4 billion litres. Brazilian companies hold part of this share, supplying hydrated alcohol to units in Jamaica and El Salvador, where it is converted into anhydrate alcohol and exported to the USA.

Additionally, the Brazilian Agency for the Promotion of Exports and Investments (APEX), linked to MDIC, has contracted the *Getúlio Vargas Foundation* to conduct feasibility studies for sugar cane production in the Dominican Republic, Haiti, El Salvador and Saint Kitts and Nevis. Additionally, APEX and UNICA will invest R\$ 16.5 million by 2009 to promote Brazilian ethanol among governments, opinion makers and others in North America, Europe and Asia. UNICA representation

offices have already been established in Washington DC (USA) and in Brussels (Belgium).

On September 11, 2007 Brazil signed a cooperation agreement with Sweden in the area of cellulose ethanol research, providing incentives to the production in developing countries and establishing an international ethanol market. According to the agreement, Sweden is also committed to abolishing taxes on alcohol by January 1st, 2009. In 2006, Sweden imported 202 million litres of Brazilian ethanol. On September 13, 2007 Brazil signed a cooperation agreement on renewable energy technology with Denmark, including the development of cellulose alcohol. On April 11, 2008 Brazil signed a term of cooperation in the area of agrofuels with the Netherlands, involving the production, logistics and transportation of Brazilian alcohol and ethanol production projects in developing countries.

The objective of consolidating EMBRAPA internationally, included in the 2008-2011 Master Plan, will also serve the purpose of disseminating ethanol production technology. Its presence has different focuses depending on the region: in Northern countries, the focus is on technology exchange; in Southern countries, the focus is on technology transfer or on humanitarian objectives. The company has been working abroad since 1997 through its foreign laboratory (LABEX) in Europe and in the USA. It also has a business office in Africa. On April 20, 2008, the EMBRAPA office in Ghana was inaugurated by the Brazilian president Lula da Silva, who stated that it will serve to disseminate the agricultural revolution that the company has promoted in Brazil to the African continent, helping to overcome poverty in these countries. One of EMBRAPA's focuses will be technology transfer in the area of ethanol. It is currently negotiating partnerships with China, Japan and Korea. It is also planning to open an office in Venezuela, which will probably be the embryo of EMBRAPA in Latin America.

BNDES is also part of the Brazilian international strategy. The bank supports the internationalization of companies and of ethanol production technology, particularly in Latin America and Africa. On April 21, 2008, BNDES closed a deal to fund ethanol production in Ghana. The first project will be in the city of Makago, between the Ghanaian company Northern Sugar Resources and the Brazilian company Constran S/A, with investments of USD 306 million (BNDES will contribute an amount of between USD 204 million and USD 260 million). The project includes the construction of the mill. The sugar cane plantation area will cover 27 thousand hectares and ethanol production will reach 150 million litres, which will be exported to Sweden by the Swedish company Sekab (Svensk Etanolkemi AB). Brazilian diplomats are trying to make deals in other five African countries, among them Burkina Faso.

The state-owned company PETROBRAS is also getting prepared to make money from ethanol on the international market. In addition to supply infrastructure, including alcohol pipelines, the company will invest in

the building of ethanol transportation ships. Recently it has also announced the purchase of the Exxon refinery in Okinawa, Japan, to place ethanol on the Asian market. According to its strategic plan, the company is expecting to export 500 million litres in 2008 and 4.7 billion litres by 2012.

e) Trends and overall impacts of the public policies in the sugar and alcohol industry

• Accelerated expansion of sugar cane plantations and installation of mills

The accelerated expansion of sugar cane crops takes place particularly in the Western part of São Paulo state, in the South-western part of Minas Gerais state (the *Triângulo Mineiro* area), in Southern Goiás, South-western Mato Grosso do Sul, Mato Grosso, Paraná, Tocantins, South-western Piauí, Southern Maranhão and Western Bahia (Ortiz 2006; Carvalho, 2008). There is an enormous growth in the number of plans for new mills in these states and in investment for the expansion of the industry. According to UNICA, by the 2012/2013 harvest, 31 new mills will have been built in the state of São Paulo. According to the Department for Economic Development of the state of Minas Gerais, since 2005 40 mill implementation or expansion projects, with a total investment of R\$ 8.9 billion, have been carried out. In the state of Goiás, where the sugar cane planted area increase 43.6% in 2007, the sugar and alcohol industry is planning to invest R\$ 12.7 billion in 2008 in 86 projects for the installation, expansion and modernization of mills (Monteiro, 2008). In Mato Grosso do Sul, there are 51 projects for new mills. According to the Ministry for Development, Industry and Foreign Trade (MDIC), estimates of the productive sector point to a volume of investments of around USD 33 billion by 2012 (USD 23 billion in the industrial area and 10 billion in agriculture).

There are different projections regarding the size and speed of expansion of this industry. According to MAPA (2008), for the 2006/2007 to 2017/2018 period, the greatest increase in production of agribusiness products will take place precisely in the sugar and alcohol industry, including ethanol, which would reach 41.6 billion litres by 2017/18⁴². The projection also points out that the sugar cane segment would lead to the occupation of new lands, with an estimated increase of 66.6%, growing from the current 6.2 million hectares to 10.3 million by 2017/2018. According to the Institute of Agricultural Economy, by the 2015/2016 harvest, sugar cane will occupy 12.2 million hectares and 26 billion litres of alcohol will be produced (Bloomberg, 2006). UNICA (Jank, 2007) calculates that, in order to meet the demand of the American market alone, which by 2022 will reach 136 billion litres, and that of the European Union market, which by 2020, with a 10% blend, will

be 14 billion litres (with the current productivity of 6.8 thousand litres/ha), additional 22 million hectares would be necessary, i.e. 6.5% of arable land in Brazil.

• Production concentration and increase in foreign capital participation

Brazil has 376 mills for the production of sugar and alcohol registered with the MAPA (2008), out of which 241 are mixed production units, 120 producing only alcohol and 15, only sugar. They are controlled by around 80 companies, most of them family businesses. According to official data, in the Brazilian model agricultural and industrial activity are well integrated: 66% of sugar cane is produced by the mills themselves, with only 33.8% being produced by 57,488 independent suppliers (CONAB, 2008).

In the year 2000, a concentration process started in the sugar and alcohol industry, with an increase in the number of acquisitions and in the concentration of the economic power of certain groups (Mendonça & Melo, 2008). This process is led by the Cosan Group, a group with foreign capital participation, which is currently the largest Brazilian and world alcohol producer: It has 18 mills with a capacity to grind 40 million tons of sugar cane a year. In April 2008, Cosan acquired the assets of the Esso distributor in Brazil, becoming the "first integrated ethanol producer in the world, with participation in sugar cane planting up to ethanol sales to end consumers" (Bahnmann, 2008). With this acquisition, Cosan now controls 7.2% of the domestic fuel market. The second largest group in the sugar and alcohol industry emerged in February 2007, with the mergers of the Santa Elisa group and the Vale do Rosário mill, establishing the Santelisa Vale, which has 5 mills with a capacity of processing 18 million tons of sugar cane. In the same year, it partnered with several foreign groups (see below). Experts warn against the oligopolistic trends in production due to the concentration of control of the sugar and alcohol industry for fuel ethanol supply and of the control of production of the raw material, sugar cane (Martins, 2007, p. 8). Agrarian geography professor Ariovaldo Umbelino de Oliveira (2008) sees the sugar and alcohol industry as the main example of the process of "territorialisation of monopolies that act simultaneously in the control of private land tenure, of the production process in rural areas and of the industrial processing of agricultural production"⁴³. And, based on the Cosan case, we can add the area of marketing.

42 OECD/FAO, in the Agricultural Outlook 2007-2016, projects a production of 44 billion litres by 2016, i.e. a 145% increase in relation to 2006.

43 In the analysis made by Oliveira, this process, together with the process of territory monopolization by companies that market and process agricultural products, these would be the two monopolistic processes that control the current world agricultural production.

Competition Protection Law

According to article 170 of the Brazilian Federal Constitution, the country's economy, based on the valuing of human labour and free enterprise, should follow the principle of free competition, among other principles. In article 173 (4), the Constitution stipulates the establishment of a law to repress the excessive use of economic power aimed at dominating markets, eliminating competition and arbitrarily increasing profits. The Competition Protection Law (Law 8.884/1994, amended by Law 10.149/2000) which systematizes and improves the Brazilian antitrust law, is designed to prevent and repress violations against the economic order. The Brazilian System for the Defence of Competition (SBDC) is made up of three agencies: the Department for Economic Supervision (SEAE), Department of Economic Law (SDE) and Administrative Council for Economic Defence (CADE). SBDC and SEAE play an investigative and analytical role and CADE plays a judging role. CADE, a quasi-governmental agency, is the agency in charge of analyzing all acts and contracts that might limit free competition and lead to a significant market control of goods or services (according to the law, market control, however, is not a crime when it results from a "natural process based on greater efficiency by the economic agent in relation to its competitors"). The council can take measures to lift or correct acts and punish those responsible for them. According to CADE, the competition law does not set limits to economic concentration in Brazil (Carvalho, 2004). Currently, a bill for a new Competition Defence Law is being analyzed in the National Congress (Bill 5.877).

The current Law 8.884 stipulates the following in its article 20: "Acts of violence against the economic order, regardless of guilt, are considered those acts, under any form, that aim at or that might lead to the following effects, even if they are not achieved: I – limiting, forfeiting or in any way damaging free competition or free enterprise; II – controlling the relevant market of goods or services; III – arbitrarily increasing profits; IV – abusively exercising a control position. Paragraph 1 – Market control resulting from a natural process based on greater efficiency by the economic agent in relation to its competitors shall not be considered the offense stipulated in subsection II. Paragraph 2 – A controlling position shall be considered that in which a company or group of companies controls a significant share of the relevant market as supplier, intermediary, buyer or financier of a product, service or technology related to it. Paragraph 3 – The controlling position referred to in the previous paragraph is assumed when the company or group of companies controls 20% (twenty per cent) of the relevant market, and this percentage can be changed by the CADE for specific sectors of the economy".

Over the past few years, there has been an increase in foreign participation in the sugar and alcohol industry and an unchecked increase in the purchase of lands by foreigners for sugar cane production. According to the president of the Committee on Agro-energy

and Biofuels of the Brazilian Rural Society (SRB), the participation of foreign capital in the Brazilian ethanol industry should reach 50% in 10 years. In the 2006/2007 harvest, it controlled 12% of this industry, according to a Datagro survey. Among the ten largest companies in this industry, four have foreign interests: Cosan, Bonfim, LDC Bioenergia and Guarani. The greatest foreign interest lies with the Cosan Group, which has 85% of its shares in the hands of foreigners⁴⁴. The pace of mergers and acquisitions in the industry has increased steeply. Between 2005 and 2007, there were 45 merger and acquisition operations with the participation of foreign companies (Mendonça & Melo, 2008).

INCRA and foreigners' lands

According to the National Registration System of INCRA (of declaratory nature), there are 33,228 rural properties registered in the name of foreign individuals or corporations in Brazil. These properties occupy 5.57 million hectares of land, out of which 3.1 million (55%) are located in the so-called legal Amazon. Due to the imperfections of the Register, INCRA's president Rolf Hackbart admits that the government does not know exactly how much of Brazilian lands are really in the hands of foreigners. According to the institute, the search for Brazilian lands by foreigners is increasing without control, driven by the search for areas for sugar cane production, by the valuing of agricultural commodities and by the interest in making investments (Roldão, 2008). Brazilian laws used to stipulate restrictions and regulate land acquisitions by foreigners living in Brazil and by foreign companies with a permit to operate in Brazil (Law 5.709/71). This control should be carried out by INCRA. However, the Constitutional Amendment 06, from 1995, revoked article 171 of the Brazilian Federal Constitution, which established a distinction between Brazilian companies of foreign capital and Brazilian companies of national capital. Since there is no distinction anymore, there is currently neither restriction nor control. An expert opinion by the Federal General Advocate Office (AGU/LA.01/97) legally supports this interpretation, i.e. that foreign companies with an office in Brazil or associated to Brazilian companies are not subjected to any restrictions regarding the purchase of rural properties. According to INCRA's president, "such a situation allows the unchecked occupation of lands by foreigners in Brazil, particularly in the area of the so-called 'legal Amazon' by Brazilian companies with foreign capital" (Hackbart, 2008). The Federal General Advocate Office is planning to issue a new expert opinion to restrict businesses by Brazilian companies with international capital. Currently, the Bill 2.289/07 is being analyzed in the National Congress. The bill is designed to restrict the acquisition of rural properties by foreign individuals and companies considering the increasing denationalization of the rural areas encouraged by agrofuel production.

⁴⁴ Despite this situation, the shareholding model used by the Cosan Group keeps the business control in the hands of the Brazilian mill owner Rubens Ometto.

Foreign economic groups (see Wilkinson & Herreira, 2007, p. 28; Pereira, 2007; Mendonça & Melo, 2008) investing in this industry can be divided into two segments: consortia of companies and investment funds with no direct involvement with the industry and companies that already operate in the sugar and alcohol industry abroad:

- **Brazil Renewable Energy Company (Brenco)** – a fund coordinated by the Indian Vinod Khosla, one of the owners of Sun Microsystems, and includes partners such as James Wolfensohn, former president of the World Bank, Bill Clinton, former president of the USA, Stephen Case, AOL founder, and is chaired by the former CEO of Petrobras Philippe Reichstuhl. It is planning to build 10 mills in the states of Mato Grosso, Mato Grosso do Sul and Goiás, with a production capacity of 3.7 billion litres at a cost of USD 2.3 billion. The group has already requested the permit to build an alcohol duct of 1.12 thousand kilometres connecting Alto Taquari (MT) to the port of Santos (SP), with the capacity to transport 4 billion litres/year. At an estimated cost of USD 1 billion, the project also includes the construction of six alcohol purchase and sale terminals along the route.
- **Adeagro**, a fund coordinated by George Soros, has bought the Monte Alegre mill in the state of Minas Gerais and is planning to invest USD 1 billion in the construction of three mills in the state of Mato Grosso do Sul, with a capacity to grind 12 million tons of sugar cane.
- **Infinity Bio-Energy**, a company with 50 investors, among them Merrill Lynch, Wellington Management, Stark Investment, Kidd & Company and Ranch Capital Investment has acquired seven mills in Minas Gerais and Espírito Santo and has three additional projects in Mato Grosso do Sul, with an investment of USD 1 billion.
- **Clean Energy Brazil**, a British investment fund, has purchased 49% of the Usasiga group and has plans to build two mills in Mato Grosso do Sul and Paraná, in addition to purchasing 33% of the shares in the three Unialco mills.
- **Comanche Clean Energy**, a group composed of British and American institutional investors, has purchased two distilleries and is planning to build an agrofuel centre in the state of Maranhão.
- **Louis Dreyfus** (French) controls the Luciânia mills in Minas Gerais and the Cresciúmal and São Carlos mills in São Paulo. It is building a mill in Mato Grosso do Sul, in addition to purchasing four mills of the group Tavares de Melo, in the states of Pernambuco and Rio Grande do Norte.
- **Tereos** (French) has a 6.3% interest in COSAN, 47% interest in Franco-Brasileira de Açúcar (FBA) and 100% interest in Açúcar Guarani.
- **Global Foods Holding** (Dutch) joined the Santelisa Vale Group in 2007, creating the Companhia Nacional

do Açúcar e do Alcool (CNAA) (National Sugar and Alcohol Company). Additionally, Carlyle Riverstone investment fund (American), the American bank Goldman Sachs and the American company Dow are part of this association. The group has plans to build four new mills: in Campina Verde, Ituiutaba, in the Triângulo Mineiro Region (Minas Gerais) and Itumbiara (Goiás), with an investment of USD 2 billion, and is expecting to achieve the capacity to process 40 million tons of sugar cane⁴⁵.

- **Cargill** (American), the main trader of sugar and alcohol in Brazil, has acquired control of the *Central Energética do Vale do Sapucaí* (CEVASA) in São Paulo and of one mill in Minas Gerais.
- **Bunge** (American) has purchased the Santa Juliana mill in Minas Gerais.
- **Pacific Ethanol** (whose partners include Bill Gates, the German company NordZucker SüdZucker and the Indian company BHL) is planning to expand its operations in Brazil.
- **BP**, the giant British oil company, started to operate in the area of agrofuels in Brazil in April 2008, with the purchase, for R\$ 100 million, of 50% of Tropical Bioenergia S/A, a sugar and alcohol producer located in Edéia in the state of Goiás.
- **Frei Cheng**, a Chinese company, signed, in March 2008, a protocol of intention with the government of the state of Bahia to supply technology to build 10 mills for ethanol production in that state.

• *Land concentration and the increase in land price*

The expansion of sugar cane plantations in Brazil has occurred through the occupation of new areas, particularly through the purchase of land and the massive leasing of lands from peasants and medium-sized farmers. This expansion is made easier by the existence of a “land market that is not well organized from the legal and social point of view, which has positive results in terms of production costs, and that at the same time concentrates land tenure and renders family agriculture unfeasible” (Ortiz et al., 2007, p. 6). Land concentration has followed the history of sugar cane plantations in Brazil and, in its current model of expansion, tends to further expand. It breaks down peasant territories, does not allow peasants to remain in the countryside, increases migration to cities and hampers land reform (see 3.4.1 below). Official data on property concentration will be published by IBGE in the second half of 2008.

Land purchase and leasing for the expansion of sugar cane plantations has resulted in an increase in rural property prices. According to a survey carried out by the Strategic Management Advisory Council of MAPA, there has been an average annual increase of 10% in

45 See: <http://www.globalfoodsholding.com/>

the price of rural properties in Brazil between 2000 and 2006, attributed, among other factors, to the increase in agrofuel production. In São Paulo, according to the Institute of Agricultural Economy, the average price per hectare increased by 113.6% between 2001 and 2006 (Brito, 2007). According to the FNP Institute, an agribusiness consultancy, in 2007 the average increase in the price of rural properties was 17.83%. The highest price rises occurred in the state of São Paulo, in the cities of Araraquara, Bauru, Piracicaba, Ribeirão Preto and Pirassununga. In the state of Bahia, in the *Cerrado* region, specifically in the town of Luís Eduardo Magalhães, the price of one hectare of land rose from R\$ 4,500 to R\$ 7,000 in 12 months. According to the professor of the Department of Rural Economy at Unesp University, José Gilberto de Souza, the rise in land prices is related to the increase in the price of agricultural commodities, "In the case of the state of São Paulo, in particular, sugar cane, citrus and beef cattle production are the main factors that have deeply changed the trend in land prices. This trend has also been more significantly impacted by the expansion of sugar cane production, which in the past few years had a growth rate above 15%" (Mansur, 2008). For professor de Souza, the main problems caused by the rise in land prices are the reduction in production diversity and the increase in property concentration.

• *Displacement and replacement of food crops*

Sugar cane plantations have displaced and replaced food crops and sectors of cattle production, resulting in a reduction in the area used for food production in these regions. The professor of agrarian geography at São Paulo University and director of ABRA, Ariovaldo Umbelino de Oliveira (2008) is emphatic, "IBGE data between 1990 and 2006 show the reduction in food production caused by the expansion in the area planted with sugar cane, which increased over 2.7 million hectares in this period. Taking the municipalities that had an expansion over 500 hectares in the area planted with sugar cane in this period, there has been a decrease of 261,000 hectares in the area planted with beans and of 340,000 hectares in the area planted with rice. This reduced area could produce 400,000 tons of beans, i.e. 12% of the domestic production, and 1 million tons of rice, which is the equivalent of 9% of the total production of this crop in Brazil. Additionally, in these municipalities there has been a reduction in the production of 460 million litres of milk and more than 4.5 million heads of cattle." The expansion of sugar cane plantations has displaced whole agricultural segments such as milk, orange and cattle production, particularly in Western São Paulo (Wilkinson & Herrera, 2008, p. 27). In the *Triângulo Mineiro* region, in Minas Gerais, sugar cane plantations have advanced into areas originally dedicated to milk, meat and leather production and in Mato Grosso do Sul, in to areas dedicated to soybean, corn and cattle production (Ortiz et al., 2007, p. 6). CONAB data for the 2007/2008 harvest also confirms the advance of sugar cane into areas originally dedicated to cattle and food

crop production. In this period, the area planted with sugar cane for the sugar and alcohol industry increased by 653,700 hectares. 64.7% (423,100 hectares) of this increase occurred in pasture areas, and 16.9% (110,400 hectares) in soybean areas. The corn crop yielded 32,200 hectares and the orange crop yielded 30,900 hectares to sugar cane plantations. According to sociologist Josinaldo Aleixo (2008), this situation is also found in the state of Mato Grosso, "where the 2008 harvest will have a decrease of around 100,000 tons, with a 12% reduction in the area planted with rice and 6% in the area planted with corn. The reason given by state officials is the advance of sugar cane plantation for ethanol production, which increased 2.6% in the state, initially affecting these two crops." Data from the Institute of Agricultural Economy show a decrease in the areas planted with 32 agricultural products, among them: rice (10%), beans (13%), corn (11%), potato (14%), cassava (3%), cotton (40%) and tomato (12%), not taking into account the reduction of more than one million head of cattle displaced to the Mid-Northern regions (*Cerrado* and Amazon regions). Additionally, the expansion of sugar cane plantations, by displacing other production segments, leaves workers in these segments without employment, and generally they are not able to work in sugar cane production.

Sugar Cane & Soybean Vs Beans, Rice and Cassava

It is interesting to compare the progress of sugar cane (and soybean) production with that of some Brazilian staple food products, for example beans, rice and cassava. In 1990/1991, Brazil dedicated 4.2 million hectares of land to the production of 260 million tons of *sugar cane* (average of 61.4 tons/ha). In 2007/2008, it dedicated 6.9 million hectares to produce 549.9 million tons (average of 78.9 tons/ha). In 1990/1991, 9.7 million hectares of land were dedicated to the production of 15.3 million tons of *soybean* (average 1.5 tons/ha); in 2007/2008, it produced, in an area of 21.1 million hectares, 59.9 million tons (average 2.8 tons/ha), i.e. the area dedicated to agribusiness products, with government support, expanded considerably in this period.

Let us now see what happened to the production of beans, rice and cassava. The progress in beans production, a staple food for the vast majority of Brazilians, did not show the same performance. In 1990/1991, Brazil dedicated 5.5 million hectares to produce 2.8 million tons of *beans* (average of 510 tons/ha). In 2007/2008, 3.8 million hectares were dedicated to this crop, producing 3.4 million tons (average of 897 tons/ha). In the 2006/2007 harvest, there was a decrease in the area planted with beans in all Brazilian regions: in the Mid-Southern region the decrease reached 10.6%; in the Northern-North-eastern region 3.4%. But due to the decrease in the planted areas, production decreased by 8.4% in the Mid-Southern region, despite gains in productivity of 2.4%. Beans were the product with the highest price rise in 2007 – 149.5% In the twelve months before March 2008, the increase in the price of

beans had already reached 168.44%.

The trend in *rice* production is similar. In 1990/1991, Brazil produced, in an area of 4.2 million hectares, 9.9 million tons of rice (average of 2.3 tons/ha); in 2007/2008, the area was reduced to 2.9 million hectares and production rose to 11.3 million tons (average of 3.8 tons/ha). Brazilian rice consumption is 13.1 tons a year. In the 2006/2007 harvest, there was a reduction in the area planted with rice in all regions (Mid-Western region: 16.2%; South-eastern region: 13.7%; Northern region: 8.7%; North-eastern region: 0.3%) except in Southern Brazil. The forecast is an increase of 5.7% in the harvest volume, with a 7.1% increase in productivity. In the first months of 2008, rice prices increased by 30% on the domestic market, which led the MAPA to lift exports of the product from government stocks to curb the price rise and ensure the domestic supply (Salvador & Paz, 2008). Cassava production occupied an area of 1.9 million hectares, producing 24.3 tons. In 2006, the area was 1.8 million hectares and production reached 26.6 million tons.

In conclusion, sugar cane and soybean production have expanded 14.1 million hectares in this period and beans, rice and cassava production decreased by 3.1 million hectares, with a relative stagnation in the volume produced or gains resulting only from increased productivity (i.e. intensification of land use and greater costs to the producer).

• *Outsourcing of labour and overexploitation*

The expansion of the sugar and alcohol industry has maintained and worsened labour conditions that massively and systematically violate the rights of rural workers employed for sugar cane cutting (see below for a detailed description of working conditions seen during the visit by the Mission to the state of São Paulo – 4.1 – and to the state of Mato Grosso do Sul – 4.2). The modernization of this sector resulted in increased productivity and in a decrease in wages. In the 1980s, average productivity was 6 tons of sugar cane cut by one worker per day; today, productivity has risen to between 12 to 15 tons (Alves, 2006). Workers earn, *on average*, R\$ 2.40 (Euro 0.9) per ton of sugar cane they cut). Mills demand a minimum of 10 tons per person a day. According to the Federal University of São Carlos, to cut this amount of sugar cane (and earn R\$ 24.00 a day = Euro 9.00), workers need to walk “*nine kilometres on foot in the sugar cane plantation, give around 73,260 blows of the machete, bending their legs 36 thousand times. And sugar cane cutters will also have to lift and carry at least 800 heaps of 15 kg of sugar cane each, over a distance of three meters, piling up the day’s production*”. (Rodrigues & Nagamine, 2007). Many workers work *12 hours a day*. This situation has further worsened because, since 2007, a genetically modified sugar cane started to be harvested, which is lighter, i.e. workers now have to cut much more to achieve their daily quota of sugar cane. In March 2007, the minimum wage in the area of Ribeirão Preto was R\$ 420.00 a

month, i.e. “wages paid today are twice as small as those paid in the 1980s” (Alves, 2007, p. 39).

The workers’ overexploitation is fuelled by a system of *payment per production*, which intensifies work at unbearable levels due to increase in labour productivity and low wages (Ferreira, et al., 1998). In the scheme of payment per production, mills use a complex measuring system that does not allow workers to have control over the amount of sugar cane they cut and over the amount they are paid. Since the quantity of sugar cane cut is measured in linear meters and the amount paid is set in tons, the value in tons must be converted into a value in meters of sugar cane cut. This calculation is made by the mill. The *lack of control by the workers over their production and over the amount they are paid* is the main means used by mill owners to press workers to increase their productivity, because if workers knew how much they would earn, they could stop working once they achieved the limit of their physical endurance (Assis, 2007; for a detailed description of this system, see Ferreira, 1998).

The consequences of this model are overwhelming (see 4.1 and 4.2 below). The number of occupational accidents is also increasing in this sector. In 2006 alone, according to data from the Statistical Yearbook on Occupational Accidents of the Ministry of Social Security (2007), there were 14,332 accidents in sugar and alcohol mills, and out of those 8,789 accidents occurred in sugar cane plantations. This is one of the economic activities with the largest number of occupational accidents in Brazil. It should be taken into account that these figures refer only to formally employed workers, i.e. those with legal working papers. Since informal work in this sector is widespread, there is an obvious under-reporting of occupational accidents or diseases in rural areas.

Actions by the Labour Prosecutor’s Office

Some levels of the Brazilian State have also responded to this situation, among them the Labour Prosecutor’s Office (MPT)⁴⁶. Labour Prosecutor General, Otávio Britto Lopes, established in December 2007 a task force to fight illegal activities in sugar cane harvesting in Brazil. The first action by the group took place in the state of Alagoas, where 15 out of 18 mills were investigated and four of them were closed. Irregularities were even found in a mill belonging to the state governor. Tired of recurrent labour law violations and the disregard for workers’ rights by

46 The MPT, one of the branches of the Brazilian Public Prosecutor’s Office, is an independent institution “which has the task of defending the legal order, the democratic regime and the inalienable social and individual interests (article 127 of the Federal Constitution). Its main role is to “defend collective rights, broadly speaking, understood as rights of diffuse, collective nature strictly speaking and of homogenous individuals rights”. On the one hand, it acts as an acting agency, investigating labour irregularities, filing suits, signing the Term of Conduct Adjustment (TAC) and, on the other hand, it acts as an intervening agency, in court suits or in the mediation of collective conflicts in labour issues.

It has established seven priorities for action:

1. Eradication of slave and degrading labour (fight against human trafficking);
2. Eradication of child labour and protection of adolescent labour;
3. Fight against discrimination in labour relationships;
4. Defence of workers’ health and of a healthy work environment;
5. Fight against frauds in labour relationships;
6. Fight against labour irregularities in the Public Administration;
7. Legalization of labour in ports and waterways.

mill owners, the MPT decided to file 12 public civil suits against mills in the state of Alagoas for not complying with health and safety rules stipulated in NR 31, for disregarding labour rights and for subjecting workers to conditions similar to slavery, with compensation of around R\$ 20 million to be paid by each mill to the workers. The MPT Prosecutor, Geraldo Emediato, also decided to report the extremely poor working conditions of sugar cane workers in Alagoas at the next ILO annual meeting, to be held in May 2008. After decades ignoring the problem, the state government is beginning to react, possibly due to the damages this situation has inflicted on the image of Brazilian ethanol abroad. The federal government decided to intensify MTE inspections in rural areas, recognizing that “historically these areas present high levels of labour law violations and that, in the past, they did not get proper attention from the State” (SIT, 2008, p. 9).

• *Slave labour, including indigenous workers*

The increased exploitation of labour caused by the modernization of production relationships in agriculture – with demands for greater labour productivity, outsourcing of labour and a decrease in labour costs – has resulted in an increase in the number of slave labour cases in the sugar and alcohol industry. According to the CPT (2008), in 2007, sugar and alcohol mills accounted for most cases of slave labour in Brazil: 53% of the 5,974 workers freed by the Special Group for Mobile Inspection, i.e. 3,117 workers, worked in mills in the states of Pará, Mato Grosso do Sul, Minas Gerais, Goiás, São Paulo and Ceará. The most significant case took place in Ulianópolis in the state of Pará, where last year 1,064 workers were freed from the Pagrisa Mill. The MTE report observes servitude due to debts, a work day of up to 14 hours, lack of good quality water and food, lack of personal protection equipment, inadequate transportation, overcrowded accommodation, etc. In June 2007, the Ministry of Labour rescued 42 workers from a mill belonging to the Cosan group, the largest in the sugar and alcohol industry, in Igarapava, São Paulo.

This situation continues in 2008. On April 8, 2008, an inspection conducted by the MTE found 1,500 workers working under extremely poor conditions, some of them in degrading conditions. They were contracted by Brenco in Campo Alegre de Goiás and Mineiros (Goiás) and in Alto Taquari (Mato Grosso). Several of them were rescued by the inspectors and one farm had its sugar cane plantation prohibited. The Labour Prosecutor's Office decided to file three public civil suits for collective pain and suffering against the company, to the amount of R\$ 5 million each.

According to CIMI (2008), in 2006/2007 cases of indigenous workers working in extremely degrading conditions or in conditions similar to slavery were reported in sugar cane farms and mills in Mato Grosso do Sul. In March 2007, 150 workers from indigenous groups who worked in sugar cane harvesting at the

Destilaria Centro Oeste Iguatemi Ltda (Dcoil) were freed by inspectors of the Regional Labour Department of Mato Grosso do Sul. In November the same year, the Special Group for Mobile Inspection of the Ministry of Labour and Employment (MTE) found 1,011 indigenous workers living in degrading conditions at the Debrasa mill. Most of the workers rescued belong to the Guarani Kaiowá people and many of them belong to the Terena people. According to Lúcia Rangel, “in addition to the degrading working conditions, there are reports that four indigenous workers have been killed in accommodation facilities at the mill. Minors forge their documents to work in sugar cane harvesting, misled by false promises of earning a lot of money, they drop out of the school in the village or city, evading inspection officials and leaving their parents worried” (Further details in 4.2).

• *Unemployment as a consequence of mechanization*

The companies in the sugar and alcohol industry have expanded the mechanization of sugar cane harvesting (which is possible under favourable topographic conditions). In São Paulo, the mechanization of sugar cane harvesting increased from 4% in 1997 to 40% in 2007. Mechanization brings environmental advantages (it eliminates the burning of plantations), but it has huge social impacts: mass unemployment in the sugar and alcohol sector. According to UNICA, all 189,000 manual labour jobs will be lost in São Paulo until the 2010/2011. On the other hand, 55,000 jobs will be created for mechanical functions and possibly an additional 20,000 in the mills. That is, unemployment will affect at least 114,000 workers in the state of São Paulo alone until the 2020/21 harvest (Toledo, 2008). All over the country, a total of 400,000 workers may become unemployed due to the mechanization of sugar cane harvesting.

• *Threat to the Cerrado biome*

At the social-environmental level, there is increased pressure from agricultural activities on the ecosystems of the *Cerrado*, threatening traditional populations, causing deforestation, threatening rivers and biodiversity. According to the UN Program for the Environment, the rapid growth in sugar cane plantations for ethanol production is a threat to the *Cerrado* biodiversity. A study by the *Instituto Sociedade, População e Natureza* (ISPN, 2007) confirms this information: every year over 22,000 square kilometres of *Cerrado* vegetation are destroyed. Using official data and based on INPE satellite images, the study maps the advance of sugar cane plantation towards areas considered as priority by the MMA for the conservation and sustainable use of this biome. This is taking place in the state of Goiás, in the municipalities of Goianésia and Barro Alto; in Mato Grosso, in the municipalities of Dom Aquino, Jaciara and Juscimeira; in Minas Gerais, in the municipalities of Lagoa da Prata, Luz, Arcos, Iguatama and Japaraíba; and in São Paulo, in the municipality of Sertãozinho. The study also questions the government's ability to control and

monitor the deforestation of this biome because, in this case, as opposed to the Amazon, there is no surveillance system in place. Finally, the study also points to the social impacts of this advance: it can damage rural populations who survive off the biodiversity and force small farmers to leave their crops to work in temporary jobs in the sugar cane industry, decreasing food production and resulting in migration to the peripheries of cities.

• *Threat to the Amazon biome and to traditional communities*

The expansion of sugar cane plantations in the Mid-Southern regions is displacing soybean and cattle production to areas of the Amazon, affecting the environment and traditional populations. According to IBGE data, the number of heads of cattle in the so-called "legal Amazon" has virtually doubled over the past ten years, increasing from 37 million in 1996 to 73 million in 2006. In this region, the cattle herd occupies an area of 53 million hectares (i.e. 73% of the deforested area of the legal Amazon). A study by the NGO Friends of the Earth (2008, p. 13) shows that one of the factors that has led to increased cattle production in the Amazon is the pressure for land in the Mid-Southern region for the expansion of the production of grains and sugar cane. Additionally, according to this study, cattle production in this region significantly contributes to the emission of greenhouse gases through deforestation, burning of pastures and the enteric fermentation by cattle.

INPE data show that deforestation in the Amazon intensified after the second half of 2007, particularly in the states of Mato Grosso and Pará. This trend is becoming more pronounced in 2008. According to INPE data, in Mato Grosso, in February 2008, 639 km² were deforested (68% more than in the previous month), 88% of the total area deforested in the Amazon, which was 725 km². A survey by the NGO Imazon, made from the analysis of satellite images, points to the same finding: the deforested area in these two states increased from 77 km² from January to March 2007 to 214 km² in the same period in 2008. Most of this deforestation (149 km²) occurred in Mato Grosso. In this state, deforestation has the open support of government officials. The governor of the state of Mato Grosso, soybean producer Blairo Maggi, has questioned the official data and, at the same time, opportunistically advocated the "right to deforestation" as something inevitable to fight the current food crisis in the world (Vargas, 2008).

The federal government has a satellite-based surveillance system for the so-called "legal Amazon" region. Based on recent information, the government has intensified actions to fight deforestation (*Arco de Fogo* Operation) and has restricted official credit to farmers in the municipalities with the highest deforestation rates. So far, these initiatives do not seem to have had any effect.

Additionally, sugar cane plantation has also increased in the "legal Amazon" region, in the states of Tocantins,

Amazonas, Pará, Maranhão, Roraima and Rondônia. According to INPE data, in the period from 2004 to 2007, the Northern region had the largest growth rate in sugar cane production (Mendonça & Melo, 2008, p. 8). According to CONAB, the 2007/2008 sugar cane harvest in the "legal Amazon" increased from 17.6 million tons to 19.3 million tons.

• *Social conflicts involving traditional populations*

CPT data about the social groups involved in conflicts in rural areas in 2007 show that 41% of the conflicts over land involve traditional populations, i.e. communities that generally exercise land tenure, but who do not have this tenure formally recognized (long-time settlers, female coconut crackers, remainders of former slave communities, fishermen, people living by the rivers, rubber gatherers, brazil nut gatherers) who live predominantly in the Amazon region. Geographer Carlos Walter Porto-Gonçalves (2008) concludes, from a geographical analysis of this data on violence and conflicts in the countryside, that currently in Brazil there is an "intense process of peasant expropriation" through a "spiral of violence and devastation" resulting from the expansion of cattle production and export cash crops into the *cerrado* and forests, which is carried out by agribusiness companies with the support of the Brazilian government. He describes how this process occurs: "The expansion of sugar cane plantations, particularly in the states of São Paulo, Minas Gerais, Goiás and Mato Grosso do Sul, has taken place mainly in pasture areas and, therefore, cattle production is advancing towards *cerrado* and forest areas, in Mato Grosso, Tocantins, Pará, Maranhã, Piauí and in the western part of Bahia. The same has happened with the expansion of soybean, corn and monocultures of non-native trees (eucalyptus and *Pinnus eliotis*). In a vicious spiral of violence and devastation, this expansion of cattle production and export cash crops, by exerting pressure on these *cerrado* and forest areas, provides opportunities to squatters, logging companies that present themselves as the modern day settlers, charcoal companies that supply the raw material to purify the iron ore for export through modern and colonial age railroad and port infrastructures. After the land is squatted, hard woods are removed, timber is burned to make charcoal, it is time for cattle producers and other agribusinessmen to complete this tragically dynamic Complex of Violence and Devastation." Traditional populations experience this expansion as expulsion from their lands and murders by private militias.

The connection between deforestation, expansion of cattle production and cases of violence and slave labour in the countryside has also been shown in a report published by the *Folha de São Paulo* newspaper (Scolese, 2008), which was based on an analysis of data from the INPE, IBGE, MTE and CPT. According to the report, out of the 50 municipalities with the highest deforestation rates, 39 had cases of conflicts over land and violence.

• *Sugar cane straw burning, excess of pesticides and water consumption*

Several studies point to other environmental effects resulting from sugar cane production (for a summary, see Hirsch et al., 2002; Guarnieri & Jannuzzi, 1992). The burning of sugar cane straw, which is done before harvesting, results in air pollution leading to respiratory problems, the intensive use of pesticides and herbicides contaminates the air, the soil, rivers and streams (with serious consequences to human and animal health). Studies conducted by EMBRAPA have shown risks of contamination of the Guarani Aquifer, the largest fresh water reserve in Latin America, which extends over several Brazilian states, Paraguay, Argentina and Uruguay. Several types of pesticides have been found in increasing levels in underground areas of the Aquifer. The expansion of sugar cane plantations has threatened the springs of the São Francisco River in Minas Gerais and contributed to the silting of rivers and the destruction of riparian forests in the *Zona da Mata* region in Pernambuco, where 95% of the Atlantic Forest area is controlled by sugar cane mills. Water consumption for alcohol production is huge: 100 litres of water are consumed for every litre of alcohol produced (Aleixo, 2007).

3.3. NATIONAL PROGRAM FOR BIODIESEL PRODUCTION AND USE (PNPB)⁴⁷

a) Introduction

The PNPB, designed by an inter-ministerial working group in partnership with the trade associations ANFAVEA and ABIOVE, was launched by the Brazilian government in December 2004 with the main objectives of diversifying the energy sources in the country, reducing diesel imports and fostering family agriculture, by implementing “in a sustainable way, both from the technical and the economic point of view, biodiesel production and use with a focus on social inclusion and regional development, through the generation of jobs and income”, based on different oilseeds⁴⁸. The main PNPB guidelines are the following: a) implement a sustainable program, promoting social inclusion; b) guarantee competitive prices, quality and supply; c) produce biodiesel from different oilseed sources and in different regions. The program design, implementation and monitoring are conducted by an Inter-ministerial Executive Commission, coordinated by the President's Civil Cabinet and is made up of 14 ministries, while the operational and executive management is performed by a Managing Group, coordinated by the MME, together with the 14 ministries, ANP, PETROBRAS, BNDES and EMBRAPA.

Law 11.097, from January 2005, introduced biodiesel to the Brazilian energy matrix. It defines biodiesel as the “biofuel derived from renewable biomass to be

used in internal combustion engines with ignition by compression or, according to the regulation, for the generation of other types of energy that may partially or totally replace fossil fuels”. The Law set a minimum mandatory amount of 5% (the so-called B5) of biodiesel blended in diesel within 8 years after the publication of the Law and 2% (the so-called B2) within three years. These terms can be changed by the National Council for Energy Policy (CNPE), which has already decided to increase to 3% (B3) the addition of biodiesel starting on July 1, 2008. This Law also attributed to the ANP the competence to “regulate and authorize the activities related to the production, import, export, storage, stocking, distribution, sale and marketing of biodiesel, inspecting them either directly or through agreements with other agencies of the federal government, the state, Federal District or local government”.

In biodiesel production, the program allows the use of a wide variety of oilseeds (castor, soybean, African palm, sunflower, *babassu* palm, peanut, *Jathropa curcas*), in addition to animal fats, provided the end product meets certain technical specifications (Resolution ANP 42/04). Additionally, the program authorizes the use of different technologies for the production of biodiesel; the most widely used process is transesterification⁴⁹. Due to its flexible format, the program should allow for a good regional adaptation and should enable the participation of different players. Thus, it is open both to the agribusiness and to family farmers.

Law 11.116/05 stipulates that biodiesel producers should be corporations based in Brazil, previously authorized by the ANP to import or produce biodiesel. Producers cannot sell the product directly to end consumers, but must sell biodiesel (B100) to distributors or refineries that will blend it with diesel. Petrobras has purchased over 90% of the production, and the remainder is purchased by the REFAP.

b) The social side: job and income generation

The program highlights the social advantages of biodiesel production and use, in addition to its economic and environmental advantages. Biodiesel would have a great potential to generate jobs and income, particularly in family agriculture in the North-eastern Semi-Arid region and the Northern region of Brazil. For every percentage point of share of family agriculture in the biodiesel market, 45,000 new jobs would be created, at a cost of R\$ 4,900.00 each. In this context, the document underlines the fact that agribusiness employs one worker for every 100 hectares planted, and in family agriculture, one worker for every 10 hectares planted. Nevertheless, according to the document, every R\$ 1.00 invested in family agriculture in the biodiesel sector would generate R\$ 2.13 additional annual gross income; i.e. family

49 This technology consists of “a chemical reaction in an alkaline medium, where vegetable oils or animal fats react with an alcohol (ethanol or methanol). The main product of this reaction is biodiesel (fatty acid ester). A by-product is glycerine, which is used in several applications in the chemical industry” (Assis et al., 2006, p. 16). Other processes that can also be used are cracking and esterification.

47 Information at www.biodiesel.gov.br and Fritz (2008).

48 See www.biodiesel.gov.br

income would double with participation in the biodiesel market (MAPA, 2006, p. 81).

c) The “social fuel” seal

In order to encourage the participation of family farmers in biodiesel production, the Program stipulates the use of the “Social Fuel” seal (Decree 5.297/04, amended by Decree 5.457/05) for biodiesel producing projects or companies. The Seal is granted by the MDA to biodiesel producers who promote social inclusion and regional development by creating jobs and income for family farmers who fit the PRONAF criteria. The Program is committed to:

- purchasing raw material for biodiesel production from family farmers, with a minimum of 50% in the North-eastern and Semi-Arid regions, 30% in the South-eastern and Southern regions and 10% in the Northern and Mid-Western regions⁵⁰;
- signing agreements with family farmers, specifying trade conditions that ensure income and terms that are compatible with the activity, i.e. including, at a minimum; (a) agreement validity, (b) purchase value and criteria for rises in the price agreed upon; (c) delivery conditions of raw material, (d) identification and agreement of representatives of the farmers who participated in the negotiations;
- ensuring technical support and training to family farmers.

The Seal guarantees biodiesel producers:

- partial or total tax relief depending on the type of producer, region and oilseed⁵¹;
- participation in biodiesel public auctions organized by the ANP and
- easier access to funding from the BNDES and its accredited financial institutions.

d) Funding sources

The PNPB has funding sources in two programs operated by BNDES, Banco do Brasil, Banco do Nordeste and Banco da Amazônia:

- The *Financial Support Program for Investments in Biodiesel*, which stipulates credits for expenses, investment and marketing, funding all the biodiesel production steps (crop, crushing and production). In 2006, BNDES was planning the approval of R\$ 2 billion for projects in this sector, exclusively dedicated to large

mills and farmers⁵².

- The PRONAF has a credit line for family farmers to support oilseed production that amounted to approximately R\$ 100 million in 2005. The funding is conditional upon a purchase and sale agreement being entered into between the family farmers and the biodiesel producer.

f) The participation of PETROBRAS

According to the director for Gas and Energy of Petrobras, Ildo Sauer (2007), biodiesel is one of the main investment areas of the company. Investment in biodiesel is part of Petrobras’ strategy to change its profile from an oil company to an integrated energy company and to lead the Latin American market for oil, gas, derivatives and biofuels. According to the MDA, Petrobras plays a key role in structuring the biodiesel chain, first because it is today virtually the only purchaser of the biodiesel sold at auction, secondly, because it is installing thousands of biodiesel stations in Brazil and, thirdly, because it has become a producer itself (Wilkinson & Herrera, 2007, p. 44).

The strategic goal of Petrobras is to lead domestic biodiesel production⁵³. In this regard, the company is planning to:

- put into operation, in 2008, three mills for biodiesel production in the North-eastern and Semi-Arid regions, in Quixadá (Ceará), Candeias (Bahia) and Montes Claros (Minas Gerais), with an average processing capacity of 57 million litres of biodiesel each from soybean, castor, *Jathropa curcas* and cotton. The company will prioritize the purchase of raw materials from family farmers, with an estimated 70,000 families needed for these three projects. Petrobras has established as criteria, among others, the organization of farmers in cooperatives, incentive to farmers’ organizations to install their own crushing facilities and incentive to plant oilseed together with food crops, thus avoiding monocultures. The company is also assessing various projects to install mills in other regions. By 2012, it is planning to produce 938 million litres of biodiesel a year;
- promote the development of technology and implement the process of producing diesel from vegetable oil at the refinery (HBio)⁵⁴. The target

50 Today, the government is considering setting one single percentage of 30% for the whole country.

51 The federal tax burden (PIS/PASEP, Cofins) on biodiesel has a maximum tax rate of R\$ 217.96/m³ (equivalent that on diesel). The Law stipulates three different levels of tax relief on this tax rate:

a) 100% reduction for the biodiesel produced from castor and African palm oil grown by family farmers in the Northern, North-eastern and Semi-Arid regions;
b) 67.9% reduction for the biodiesel produced by family farmers in any region;
c) 30.5% reduction for the biodiesel produced by agribusinesses from castor or African palm oil in the Northern, North-eastern and Semi-Arid regions.
The state tax burden (ICMS) on biodiesel is 12% in all states (Agreement ICMS nº # 113, from 10/06/2006).

52 Gazeta Mercantil. BNDES: Melhor para as grandes usinas de biodiesel. 08/31/2006.

53 Petrobras’ Strategic Plan 2020 (2007) includes the following objectives for the agrofuel segment: “Act, globally, in the marketing and logistics of biofuels, leading the national biodiesel production and expanding the share in the ethanol business.” Unlike the ethanol area, where the company plans to focus on the logistics and marketing, for biodiesel the focus is on production leadership to meet the demands of the domestic market and on opportunities for foreign markets. Until 2012 the company is planning to invest US\$ 1.5 billion in agrofuels (US\$ 435 million in biodiesel and US\$ 60 million in HBio).

54 HBio is the name of the technology developed by Petrobras to include the processing of the renewable raw material (vegetable oil or animal fat) in the refining scheme of petroleum diesel, i.e. the vegetable oil is blended with petroleum diesel and treated with hydrogen, a process used in refineries to reduce the sulphur content in diesel. Through this process, 100 litres of vegetable oils result in 96 litres of diesel. In this sense, it is a different process from the transesterification used for biodiesel production.

of the company for 2011 is to process 1.03 billion litres of vegetable oil using this technique. In 2008, the company is expecting to have implemented the process in five refineries. Petrobras sees this process as complementary to the PNPB biodiesel process. The implementation of this program was accelerated due to the pressure exerted by the soybean agribusiness to use production surpluses. Therefore, it is having an impact on market prices.

- establish a subsidiary company for the biofuel sector, restricted to production.

g) Trends and impacts

• *Expected expansion*

The current Brazilian demand for diesel is approximately 40 billion litres per year. In order to meet the 5% demand in 2014, the estimate is that around 2.4 billion litres of biodiesel/year will be necessary (MAPA et al., 2005). According to the zoning survey performed by EMBRAPA, "the areas dedicated to supply the 5% of diesel are immense: 600,000 hectares in the Southern region; 1.32 million hectares in the South-eastern region, 360,000 hectares in the Mid-Western region, 600,000 hectares in the North-eastern region and 35,000 hectares in the Northern region" (Aleixo, 2008). For the year 2035, MAPA has projected, in the first edition of the PNAE (2005), the production of 50 billion litres of biodiesel for the domestic market, with the need for 900 additional biodiesel mills and the incorporation of 20 million hectares of new areas to grow oilseeds, taking into account yield increases (from 600 kg/ha to 6 tons/ha). In this case, official studies point to the existence of 90 million hectares supposedly available ("free") in the *Cerrado* for the expansion of areas to grow sugar cane, soybean and castor and 70 million hectares in the Amazon to grow African palm (NAE, 2004, p. 38). Studies have warned about the impacts of this expansion into the *Cerrado region* (Ortiz, 2007).

• *Income variations*

The income family farmers could earn within the biodiesel program varies considerably depending on the region and the crop. While families producing African palm in Northern Brazil could earn an annual income of R\$ 31,900.00, castor producers in the Semi-Arid regions of the Northeast would make only R\$ 1,320.00. Family farmers producing soybean in the South may make up to R\$ 44,000.00 a year. The two key factors that differentiate the regions are productivity and the amount of cultivated land (Lima, 2007).

• *Concentration of biodiesel production*

According to ANP (2008), in April 9, 2008 there were 51 authorized production units, with an estimated production capacity of 3 billion litres. In 2007, according to the same agency, 402.7 million litres of biodiesel were produced. Three companies produce a total of 80% of the national biodiesel production: Brasil Ecodiesel,

Granol and Caramuru. The states with the largest production were Goiás, Bahia, Ceará, Rio Grande do Sul, São Paulo and Piauí.

According to MDA data (MDA, 2008), in April 2008 there were 31 industrial units granted use of the Seal, with an installed capacity of 2.2 billion litres of biodiesel. The states with the largest number of mills with the Seal were Mato Grosso (7), São Paulo (5), Rio Grande do Sul (4), Goiás (3) and Bahia (2). The companies with the largest number of units are Ecodiesel (six, with an installed capacity for 600 million litres) and Granol (three, with an installed capacity for 310.1 million litres).

According to information from MDA, the government's target is that 80% of the biodiesel is produced by companies applying the Social Seal. So far, nine public auctions have been conducted (the latest auction was also open to companies not fulfilling the requirements of the Seal). The amount of biodiesel negotiated was 1.59 billion litres. The company Brasil Ecodiesel was the sales leader: out of the total amount negotiated so far, 720 million litres were sold by the company's six mills. The two auctions conducted in 2008 collected 330 million litres, enough to ensure the achievement of the target of 3% blend for July through September 2008. The price of the biodiesel negotiated in the auctions this year was 44% higher than last year, a fact that the ANP attributed to increases in soybean prices on the international market (Junior, 2008).

• *Most raw material comes from agribusiness*

In spite of these incentives, MDA estimates that currently only 24% of the biodiesel negotiated in the auctions comes from family farming. This means that 76% comes from agribusiness (Carmélio, 2007). As a consequence, industrial agriculture is the main beneficiary of the biodiesel program. Nevertheless, MDA estimates that around 100 thousand farmers are registered in the Program (MDA, 2007) and that this figure increase to 200 thousand.

• *Soybean is the most widely used oilseed*

Soybean has become the main oilseed used for biodiesel production. According to the Department for Production and Agro-Energy at MAPA "today, 90% of the raw material used for biodiesel production comes from soybean oil" (MAPA, 2008) and only 10% comes from other oilseeds, mainly castor. According to information from the media, in 2006 the company Brasil Ecodiesel used a proportion of 97.2% soybean, 2.1% castor and 0.7% cotton for biodiesel production (Medina, 2006)⁵⁵. Although there are other crops that can be used for vegetable oil production (including some with a greater yield), vegetable oil market prices are a key argument for soybean to continue to be the main raw material in the biodiesel program. Firstly, because it has a more moderate price (at least for the time being); secondly,

⁵⁵ See also: Brasil Ecodiesel quer reduzir uso de soja para 75 pct em 2007. Reuters, 13.4.2007.

because it will be a useful means to absorb production surpluses, particularly when international prices of the product are very low, working as a regulation device. The high international price of other high quality vegetable oils, such as African palm and castor oil, makes their use for biodiesel production to have little economic sense for the time being.

Therefore, biodiesel has become an additional way of selling a soybean by-product: soybean oil. Thus, it serves mainly to make use of the idle crushing capacity of around 10 million tons that the industry has available (Schlesinger & Noronha, 2006, p. 16). In other words, this model provides an “additional market for the largest and best consolidated chain of the agribusiness – that of soybean – controlled by giant North American corporations such as Cargill, Archer Daniels Midland (ADM) and Monsanto” (Moreno & Mittal, 2008, p. 14).

Brazil is the second largest soybean producer and the largest soybean exporter in the world. CONAB (2008) estimates that in the 2007/2008 harvest Brazil will produce 59.9 million tons of soybean (2.7% more than in the previous harvest), with a cultivated area of 21.1 million hectares (471.7 thousand hectares greater than in the previous harvest). The area planted with soybean corresponds to 45% of the total area planted with grains in Brazil, which in the current crop is 46.7 million hectares. This sector accounts for only 5.5% of jobs in agriculture. The soybean production area grew, in the current crop, in the Northern region (20%), in the North-eastern region (7.9%) and in the Mid-Western region (4.9%), with a reduction in the South-eastern region (3.9%) and in the Southern region (1.4%). In Mato Grosso, there was an expansion of 484.9 thousand hectares (9.5%) in comparison to the previous crop. In 2007, Brazil exported 38.5 million tons of soybean (23.7 million tons/grain, 12.5 million tons/soybean meal and 2.3 million tons/soybean oil), which was the most significant export item among Brazilian agricultural products⁵⁶, with the main buyers being the European Union (46.1%) and China (27.7%). For 2017/18 MAPA estimates a soybean crop of 75.3 million tons (out of which 35.2 million tons for export), occupying a planted area of 25.6 million hectares.

The expansion of soybean is encouraged by public resources, concentrated on the agribusiness in the form of advantageous credits, investments in infrastructure, processing and transportation, agricultural research, favourable renegotiations of farmers’ debts, etc. Brazilian laws favour soybean grain exporters (Law 87/1996). It “exempts companies that export primary and semi-processed products from paying the Tax on Industrialized Products (IPI, a federal tax) and the Value Added Tax on Sales and Services (ICMS, a state tax), which reduces the final price of the grain when compared to the price of soybean meal and oil” (Schlesinger & Noronha,

2006, p. 12). Additionally, “soybean crops are funded, today, for the most part, by multinational corporations, international banks – both public and private – and by suppliers of fertilizers and pesticides that, at the same time, supply their technology package” (Bickel, 2004). The soybean sector is controlled by four multinational corporations that move two thirds of the Brazilian soybean production: the North American corporations ADM, Bunge and Cargill and the French Louys Dreyfus. In 2005, they negotiated around 60% of exports and crushed 60% of the grains for the domestic market (Schlesinger & Noronha, 2006, p. 104).

The social and environmental impacts of soybean monoculture in Brazil have been documented in several studies (see Schlesinger & Noronha, 2006; Bickel, 2004). In summary, we wish to highlight some of these impacts. Firstly, that soybean monoculture contributes to the deforestation of the Amazon and the *Cerrado* and the degradation of the environment, a decrease in the groundwater level and a reduction in the amount of water in streams and rivers in the region. During the Mission’s visit to Brazil, the World Bank published a report (*Global Monitoring Report 2008*) showing that, between 2000 and 2005, Brazilian farmers deforested 31,000 square kilometres of forests for the production of soybean, beef and timber. On the other hand, the Soybean Working Group, established by soybean companies and environmental NGOs (such as Greenpeace and WWF) to monitor the implementation of the soybean moratorium⁵⁷, showed that the 2006/2007 soybean crop does not come from newly deforested areas in the Amazon region. However, recent INPE data show an acceleration of deforestation in the Amazon starting in the second half of 2007, particularly in the regions that produce soybean (such as the Northeast of Mato Grosso) and cattle (South-eastern Pará). In spite of recent initiatives by the federal government to curb this expansion, the monthly INPE data for the first months of 2008 continue to show high rates of deforestation in the Amazon.

Additionally, the use of pesticides, which are frequently sprayed from airplanes, contaminates the environment, with serious damage to human health. For soybean production, 5 to 10 litres of pesticide per hectare are used on average, i.e. in an area of 21 million hectares planted with soybeans 105 to 211 million litres of pesticides are sprayed annually. It is suspected that the herbicide glyphosate used in soybean crops is responsible for the large number of early births and miscarriages in Chapadão do Céu and Mineiros, in Goiás, which are municipalities with intensive soybean production.

The expansion of the soybean monoculture to the *Cerrado* and the Amazon, encouraged through public incentives, has historically been linked to land and

56 Soybean exports account for 19.5% of Brazilian exports of agricultural products, holding an important position in Brazilian exports as a whole and in the Brazilian trade balance: according to MAPA, in 2007, agricultural products accounted for 36.4% of the R\$ 160 billion exported by Brazil.

57 The soybean moratorium was a commitment, assumed in July 2006 by companies that are members of the Brazilian Association of the Vegetable Oils Industry (ABIÓVE) and the National Association of Cereal Exporters (ANEC), not to buy soybean produced in newly deforested areas in the Amazon biome. For further information see: www.greenpeace.org

income concentration, with the expulsion of peasants and the marginalization of peasant farming. In spite of the increase in grain production, “the number of rural properties devoted to soybean production has decreased 42% in one decade. The rate was 16.3% for other properties. This expansion process has not been peaceful: it can be behind of at least four of the 16 land conflicts in the state of Mato Grosso in 2007, of at least 18 of the 38 conflicts that took place in Paraná, and of at least two of the 105 conflicts that happened in Pará” (Repórter Brasil, 2008). According to CPT data, conflicts over land involving peasant territories and indigenous reservations are directly related to the areas of expansion of soybean and cattle production. Land grabbing of public lands has been the recurrent form of land concentration in the Amazon. The “Parliamentary Investigation Commission on State Land Grabbing” (2001), established to investigate the illegal occupation of public lands in the Amazon, showed that, among other purposes, squatting was aimed at regaining funding for agricultural projects and bonuses for carbon sequestration. A study by INCRA/FAO, coordinated by Alberto Di Sabatto, concluded that 1,438 registered rural properties covering an area larger than 10 thousand hectares (i.e. taken together, with an area of 46 million hectares) are suspected of illegal occupation of public lands (Mello, 2006, p. 44ss).

Family soybean farmers are traditionally located in Southern Brazil. However, these farmers are increasingly coming under pressure from the competition of industrial soybean production. Many of them cannot survive economically under these conditions and are forced to sell their lands. Thus, land concentration increases (Schlesinger, 2006).

Additionally, Brazilian soybean production generated only 5.5% of the jobs in Brazilian agriculture (Schlesinger & Noronha, 2006, p. 108) and is also connected to the practice of slave labour. According to a recent study by the NGO Repórter Brasil (2008): “In spite of the intense mechanization in soybean production, slave labour has been found in soybean farms for soil clearing before seeding. Data from the ‘black list’ of slave labour of 2007, a public register of employers that use this type of labour kept by the Ministry of Labour and Employment, show that 5.2% of the cases were linked to soybean production. Companies and financial institutions have implemented instruments to fight slave labour, encouraged by the Brazilian Pact to Eradicate Slave Labour, but there are still flaws and the soybean harvested by the farmers on the ‘black list’ still enter the market.”

3.4. SOCIAL PROGRAMS

3.4.1. National Land Reform Program

In November 2003, the government of President Lula da Silva presented its National Land Reform Plan (MDA, 2003). The plan uses the data on rural poverty and land concentration mentioned above and identifies a

set of beneficiaries amounting to 50 million people. Additionally, as direct beneficiaries of land reform, one might include among the targets of the plan: family farmers, traditional rural communities, riparian populations, people affected by the construction of dams and other infrastructure programmes, people living in indigenous areas, rural female workers and young people living in rural areas.

The plan sets the following explicit concrete targets:

1. Settle 400,000 additional families. Thirty thousand would be settled in 2003, 115,000 in 2004 and in 2005 and 140,000 in 2006.
2. Legalize the land tenure of 500,000 families.
3. Benefit 130,000 families through land credit.
4. Recover the productive capacity and economic feasibility of current settlements.
5. Create 2,075,000 new permanent jobs in the reformed sector.
6. Establish the geo-referenced register of the national territory and legalization of 2.2 million rural properties.
7. Recognize, demarcate and give title deeds to former black slave communities.
8. Guarantee the resettlement of non-indigenous settlers of indigenous areas.
9. Promote gender equality in land reform.
10. Guarantee technical support and rural extension, training, credit and marketing policies to all families in the reformed areas.
11. Guarantee universal access to the right to education, to culture and social security in the reformed areas.

In order to achieve these targets, the Plan includes the implementation of *new settlements* to democratize access to land, to promote productive integration and to create a new rural development model. The key instrument for the democratization of access to land will be the so-called *social interest expropriation* of non-productive large rural properties, in conjunction with other instruments such as land purchase-sale, use of public lands, legalization of land tenure and *land credit*. *Land Credit* is a complementary instrument to expropriation and consists of providing access to land through subsidized funding for the purchase of a rural property and for basic investments. Additionally, the *land register and legalization* are designed to counter the illegal appropriation of vacant lands and non-conformities in the land register. One of the priorities set by the Plan is the establishment of a National Register of Rural Properties. The goals of this program are the following: design the geo-referenced Land Register of 2,2 million rural properties in four years and of 4,8 million in eight years; design of the Land Map and the Brazilian Land Register in a period of eight years; legalization of 500,000 good faith tenures of properties covering an

area of up to 100 hectares in a period of four years and of 1 million in eight years; taking possession of vacant lands, together with state governments, and use them for the settlement of 45,000 families in four years and of 105,000 in eight years; establish a qualified database for the collection of the Rural Property Tax; and, finally, the *promotion of gender equality in land reform* stipulates the expansion of access to credit by rural female workers and of the granting of title deeds for both women and men, regardless of their marital status.

In January 2007, the MDA published a *balance* on the 2003 to 2006 period, stating that 381,419 families had been settled in 2,343 settlement projects, in an area of 31.6 million hectares (Milani & Richard, 2007). Over this period, an average of 95,355 families were settled every year. An amount of R\$ 4.1 billion was spent to purchase lands. This data, however, has been challenged by social movements, by experts and by the press. The movements and organizations that struggle for land reform, the MPA, MST, MAB, MMC, CPT and ABRA made a balance (MPA, 2006) of government actions from 2002 to 2006 that presented a set of conclusions showing that the government failed in its attempt to carry out the land reform and to support the development of peasant farming. According to Ariovaldo Umbelino de Oliveira (2007), only 92,000 families were settled in new settlements resulting from expropriations, land purchases and public lands. The remaining 289,000 families were settled as a result of land tenure legalization, resettlement projects for families affected by the construction of dams and land reorganization. Actually, the MDA includes as part of the first target the total results achieved in all the other targets.

INESC assessments (2006) for 2003-2005 show that the government decreased the use of expropriation to get lands and resorted more often to land purchases, possession taking and recognition. It also shows that the lack of update of productivity rates, preventing expropriation in areas that are strategic for the development of peasant farming, promotes the concentration of settlements in the so-called "legal Amazon" (an estimated 66% of the total area). Settlements in this region represent a risk to environmental sustainability and have been "functional for the expansion of the agribusiness in the agricultural frontier, providing cheap labour for a process of disordered and predatory occupation".

According to economist José Juliano de Carvalho Filho (2007) there is an evident emptying of the concept and proposal of land reform presented by the Lula da Silva administration. A comparative analysis of government documents on land reform show the change from a structurally-biased model to a compensatory biased model: "Settlement targets are no longer set and the reform area is no longer considered as strategic in the implementation of the land reform. Therefore, settlements continue to be implemented in a fragmented fashion and land expropriation for land reform is no longer considered the main instrument for the implementation of the agrarian policy. On the contrary, the emphasis remains on land credit programs (following the *Banco*

da Terra models). There is no clarity regarding the prevention of the outrageous legalization of squatted lands in the Northern region, which serves the interests of the 'agribusiness'."

In an analysis of land reform in the period of 2008 – 2011, INESC (2007) found that "the land issue is being progressively less solved through land reform and expropriation". As early as 2007, it was found that the government had reduced the use of land expropriation and prioritized land purchase instead. In 2007, only 204,500 hectares were expropriated (the annual average between 2003 and 2006 was 682,500 hectares), which represented a 62% decrease compared to 2006 (when 538,600 hectares were expropriated). On the other hand, there was a significant increase in government expenditures on land purchase. In 2007, the MDA spent 1.4 billion on land purchase, i.e. 1 billion more than in 2006. According to INESC, the federal budget for 2008 showed a R\$ 265 million reduction in the resources allocated to the land reform program.

The CPT coordinator in Pernambuco, Plácido Júnior (2008, p. 5), stresses that, although data from INCRA shows that Brazil has around 130 million hectares of non-productive lands (and additional 200 million hectares of vacant lands), the government gave up using the main instrument used for land reform, namely land expropriation, ignoring the non-compliance with the social role of property. According to him, "the problem is that these lands are being disputed by the agro-hydro business, now including the additional demand of agrofuel companies". Dom Tomás Balduino, a Catholic bishop who is a member of CPT's Council, raised the following issue: "Not guaranteeing the social role of property by performing expropriations openly violates the Constitution in a fundamental matter. Is not this violation of the social role of property a liability crime by the State?"

INCRA has been stressing that its priority is not quantity, but the quality of land reform settlements. The government has allocated increasing resources to settlements in the past years. However, even land reform settlements are not immune to the effects of the expansion of sugar cane plantations. In Pernambuco and in Paraíba, mills are exerting a strong pressure, with incentives by INCRA and Banco do Nordeste, to introduce sugar cane plantations in land reform settlements, threatening beans and cassava crops (Mendonça & Gomes, 2008, p. 5). Studies made at the *Triângulo Mineiro* region (Minas Gerais) and in Western São Paulo also show that the expansion of sugar cane plantations has isolated settlements, mill owners have offered advantages to the settled farmers who are willing to grow sugar cane, threatening food crops and making vegetable and fruit production more expensive, because farmers were forced to use various pesticides to fight the pests that came with sugar cane plantations in the region (Ortiz et al, 2006, p. 7).

Thus, the expansion of agribusiness, driven by agrofuels, seems to lie at the root of the emptying of the

government's land reform policy of its intended purpose. On the one hand, in the regions where expansion is taking place, there is actually a land counter-reform, as the monoculture model promotes land and income concentration. On the other hand, this process strengthens the sectors connected to the agribusiness politically, which could also explain the decrease in resources for expropriation and the adoption of other measures to expedite land reform settlement programs. In other words, it explains the lack of political will to perform land reform. And, finally, the expansion of the sugar cane, soybean and eucalyptus monocultures, to the extent that they heat up the land market, also makes land reform through land purchase increasingly expensive, and this, in turn, provides good business for land owners. INCRA's president, Rolf Hackbart, recognized that the increase in land demand and purchase (also by foreigners) in the interior of Brazil is causing problems for the government regarding the purchase of properties to be used for the land reform program (Quadros, 2007).

3.4.2. Policy for Indigenous Peoples

The 1988 Federal Constitution signified real progress in the political and legal position towards indigenous peoples by the Brazilian State. The new constitutional text includes the concept of diversity and cultural specificity of the indigenous peoples, recognizing their right to social organization, to their customs, languages and traditions. Thus, it moves forward from the traditional focus on guardianship and incapacity of the members of indigenous groups, which constituted the basis of the policy to integrate them into the culture of the country, denying their diversity and autonomy, and was the tenet of the previous legislation. According to the 1988 Constitution, the State has to protect the rights of the indigenous peoples. Amendments to the Civil Code in 2002 also represented an attempt to fit into this new vision. However, the only specific piece of legislation on indigenous peoples, the Statute of Indigenous Peoples, has not yet been drafted to fit the new constitutional understanding. Thus, there is a mismatch between the constitution that recognizes the full capacity of the members of indigenous peoples and the Statute of Indigenous Peoples, which still keeps them under the guardianship of the FUNAI (Melo, 2007, p. 111-128). In practice, in the Statute of Indigenous Peoples, what still prevails is the focus on guardianship and the incapacity of the members of indigenous peoples. Bill 2.057/91 is currently being analyzed at the National Congress. This bill deals with the new Statute of Indigenous Peoples and is designed to make the ordinary law match the constitutional text.

The role of FUNAI is to demarcate indigenous lands, remove people who are not members of indigenous groups from indigenous lands and control the entry of third parties in areas where isolated tribes are found. In the past few years, the FUNAI budget has been increased, the agency has intensified the process of demarcating indigenous lands and the social programs dedicated to indigenous communities. According to

FUNAI data, there are currently 611 indigenous lands in Brazil, with a total area of 105 million hectares (12.41% of the Brazilian territory). Out of those, 398 are legalized, a total of 92 million hectares, 90 areas are being demarcated, declared or legally confirmed and 123 are being assessed. According do IBGE, there are currently 740,000 members of indigenous groups in Brazil, half of whom live outside indigenous land areas. According to FUNAI, 450,000 members of indigenous groups live in villages, belonging to 225 different peoples and speaking 180 different languages. The largest group is the Guarani Kaiowá, with 35,000 members.

Brazilian civil society "recognizes the action of the federal government in the demarcation of areas, but thinks it is still insufficient. Additionally, the promotion of measures to protect indigenous communities from the interference of economic players and to foster their own development in the demarcated areas is also insufficient" (ESCE-Rights Platform, 2007). It is further recommended that the policy for indigenous peoples builds "systematic and permanent measures that are able to counter the constant violations of the rights of indigenous peoples, overcoming the actions restricted to relief".

Other sectors of the Brazilian society, particularly those linked to the interests of the logging companies, mining companies and of agribusiness, have tried to obstruct the demarcation process, claiming that indigenous lands restrict the development of the country and do not allow the expansion of Brazilian agriculture. A clear example of this attitude is the hostile reaction to, and defiant attitude towards the law on the legal establishment of the Indigenous Land *Raposa Serra do Sol* (Roraima) by a Decree on April 15, 2005, in an area of 1.7 million hectares. This reaction was also felt at the legislative level, with a number of bills designed to lift the enforcement of the Decree currently being analyzed in the House of Representatives and the Federal Senate. Some farmers and cattle ranchers, with the use of armed resistance, refuse to leave the indigenous land and have been supported by sectors of the rural oligarchy, the military and politicians.

The policies to encourage agrofuels by the Brazilian State contribute, in many respects, to hamper the demarcation and decent survival of members of indigenous groups in these areas. Indigenous leaders fear that the expansion of sugar cane plantations will further delay the demarcation of their lands. According to the CIMI, "the incentive to agrofuel production, particularly that of ethanol, has triggered a race for the purchase of land, which has further hampered the possibilities of demarcating indigenous territories and worsened the already existing situations of conflict" (CIMI, 2007).

3.4.3. National Program for the Eradication of Slave Labour

After ignoring the issue of slave labour in the country for many years, the Brazilian government started to deal with this issue effectively after 1995, with the establishment of the Executive Group for the Repression

of Forced Labour. The government of President Lula da Silva took significant steps to fight slave labour. It adopted a National Plan for the Eradication of Slave Labour, established the National Commission for the Eradication of Slave Labour and recognized at the international level the responsibility of the Brazilian State in the violation of human rights, as in the case of José Pereira, a worker from the state of Pará; a case that was presented before the Inter-American Commission on Human Rights (IACHR) by the CPT, CEJIL and Human Rights Watch (IACHR, 2003).

The Plan contains a number of measures, ranging from general actions⁵⁸ to an improvement in the administrative structures of the Group for Mobile Inspection, of the law enforcement agencies (Judiciary and Federal Police), of the Federal Prosecutor's Office and the Labour Prosecutor's Office. Additionally, specific actions have been taken to promote citizenship, fight impunity⁵⁹, and to promote awareness-raising and sensitization.

In 2004, the government established the register of companies and individuals charged with exploiting slave labour (also known as the "black list"), making it available on the webpage of the Ministry of Labour and Employment. On March 13, 2008, the list included 183 farms and companies that were involved in the practice of slave labour (MTE, 2008).

This issue has also mobilized Brazilian companies and institutions. In 2005, the National Pact for the Eradication of Slave Labour was established upon an initiative by the ILO in partnership with approximately 100 companies and institutions. Through the Pact they commit themselves to several measures to eradicate slave labour, including the establishment of trade restrictions to the companies in the production chain that are identified as using slave labour.

Several organizations and observers highlight the fact that the repressive actions against the crime of slave labour have increased in terms of efficiency, stressing the positive role played by the Labour Prosecutor's Office, by the Prosecutor General's Office, by the Supreme Court, by the Public Prosecutor's Office and the coordinated actions among these institutions and the Federal Police. According to data from the Department of Labour Inspection (2008, p. 16), connected to the MTE, the Special Group for Mobile Inspection carried out, 625 inspections throughout Brazil between 1995 and 2007, involving 1,880 farms and resulting in the rescue of 27,731 workers in situations similar to slavery. In 2007

alone, 114 inspection actions were taken, involving 203 farms, with 5,963 workers being freed. From 2003 onwards the Brazilian government has intensified measures to repress slave labour.

The mechanisms put in place by the Brazilian State to eradicate slave labour have been systematically challenged by organizations and politicians connected to the agricultural sector. The most recent offensive occurred in 2007, just after an inspection by the Special Group for Mobile Inspection freed 1,108 sugar cane cutters subjected to conditions similar to slavery by the mill Pará Pastoral e Agrícola S.A. (Pagrisa) in Ulianópolis, state of Pará (Plassat, 2007). Pagrisa, in addition to getting resources from BNDES, through the HSBC bank, also has operations with Banco do Brasil, Bradesco and Banco da Amazônia, "used to sell alcohol to BR Distribuidora, a subsidiary of Petrobras, which announced they had lifted purchases after the reports of slave labour" (Sansón, 2007). The action undertaken by senators and federal congressmen connected to the practice of slave labour, or who received financial support from companies involved in these crimes, contribute to reduce the effectiveness of the repressive actions and to hamper the implementation of the National Plan for the Eradication of Slave Labour (Figueira, 2007).

3.4.4. National Program for the Eradication of Child Labour (PETI)

PETI, established in 2001 and integrated to the *Bolsa Família* Program in 2005, is designed to eradicate child labour in Brazil and has the specific objectives of guaranteeing that children have access to and stay in school, implementing extra-curricula activities (extended school day) and providing families with additional income. The actions of the Program are focused on the family, which should be protected and socially included through social-educational programmes and the generation of jobs and income. The inclusion of the family in the income transfer program is conditioned on the removal of children from labour activities and their participation in social-educational activities, as well as to the attendance of regular teaching and extracurricular activities by children. Until December 2007, inspections had taken 7,999 children and adolescents from work; 357,788 establishments had been inspected and child labour was found in 673 of them (SIT, 2008, p. 29).

In 2004, the National Plan for the Prevention of Child Labour and Protection of Adolescent Workers (MTE, 2004) was established, with the aim of giving childhood back to 3.5 million children and adolescents aged between 5 and 15, in addition to guaranteeing legal protection to an additional 2.5 million adolescents aged between 16 and 17 by ensuring them decent working conditions. The Plan has ten strategic dimensions that order priorities and activities.

58 Among them are the following: declare the eradication and repression of slave labour as a priority of the Brazilian State; include in the Zero Hunger Program the municipalities of the states identified as centres of slave labour recruitment, include the crimes of submitting workers to a situation similar to slavery in the Law of Heinous Crimes and increase the respective punishments; pass the Proposal for Constitutional Amendment PEC 438/2001 on the expropriation of lands found to have workers submitted to conditions similar to slavery, pass Bill 2.022/1996 on the prohibition to sign contracts with public organizations for companies that, either directly or indirectly, use slave labour, prevent companies from getting and maintaining rural credit or tax incentives in contracts with funding agencies when they have engaged in the employment of slave labour or submitted their workers to degrading working conditions, etc. (See Presidência da República 2003, p. 11-16).

59 Among these programmes are the following: implement policies for social reinsertion such as health services, vocational training, job and income generation, land reform, issuing of civil documents, unemployment pay and temporary social benefits, legal assistance, etc. (See Presidência da República 2003, pp. 29-32).

4. Cases visited

4.1. SUGAR CANE CROPS IN SÃO PAULO

"Sugar cane is needed for survival, but it is bringing death. We do not know what to do to ensure life."
Female worker at Engenheiro Coelho.

A Mission group visited the state of São Paulo to verify reports of the social and environmental consequences of the sugar cane industry which endanger human rights, especially those of rural workers who work cutting sugar cane.

The state of São Paulo is one of the most highly developed in Brazil. Despite this, IPEA (2005) estimates that in 2004 15.6% of the state population was living in a situation of poverty, i.e. 5.9 million people – 29.7% of the rural population. And, according to IBGE, the state has one of the lowest rates of informal work: 36.3% in 2005. In the same year, the illiteracy rate in the state was 5.4 (less than the national average, which was 11%); 94.2% of the population live in urban areas. The mean monthly income of the workers was R\$ 1,060.00; currently the mean hourly salary is R\$ 6.60. The richest 10% had an income that was 13.6 times higher than that of the 40% poorest. In other words, the richest 10% received a monthly average of R\$ 4,550.00, the 40% poorest, R\$ 333.77⁶⁰. In the state only 5.5% of the working population are engaged in agriculture.

The land ownership concentration index in São Paulo was 0.754 in 2000 (MDA, 2001). According to CPT data from 2007, 75 conflicts occurred in the countryside, involving 8,641 families, in an area of 60,285 ha of land. Three cases of slave labour were recorded, with 61 workers released. Municipalities such as Ribeirão Preto have a great concentration of wealth: the highest sales of BMWs and Mercedes, the greatest movement of helicopters after São Paulo and Rio de Janeiro. The region is considered to be the "Brazilian California" because of the high technological development in the sugarcane industry. Thirty years ago, this city produced all the food, peasants were living in the rural areas and in fact it was a wealthy region with an equitable income distribution. Now it is a huge sugar cane plantation, with 30 mills that control all of the land. In the city there are 100,000 people who live in shantytowns (*favelas*) (among the 540,000 inhabitants of the municipality). The prison population is 3,813 people (adults only), whereas the population that making a living in the agricultural sector is only 2,412, including children⁶¹.

São Paulo is the leading state in sugar and alcohol production. During the 2006/2007 harvest, ethanol production in Brazil reached 21.30 billion litres, i.e.

21.90% greater than the previous year. Out of this total, the Mid-Southern region of the country contributes with 90.71%, and the North and Northeast with 9.29%. In the 2007/2008 harvest, the area planted with sugarcane in Brazil was 692 million hectares, 12.30% higher than the previous harvest. Out of the total of sugar cane which is being crushed by the sugar and alcohol industry, the mills in the state of São Paulo will crush 59%; those of Paraná, 8.9%; those of Minas Gerais, 7.7%; those of Alagoas, 5.5%; those of Goiás, 4.2% and those of Pernambuco, 3.7% (according to data from CONAB, 2008; Carvalho, 2008). Other data indicate that the South-eastern region, especially the state of São Paulo, is responsible for 88% of the volume of sugarcane, 89% of the alcohol, and 90% of the sugar produced in Brazil (Noronha & Ortiz, 2006). According to UNICA, by the 2012/2013 harvest, the state of São Paulo will have ensured the construction of 31 new mills, reaching a total of 179 units.

A reduction of 23% in the number of employees was found in the sugarcane industry between 1992 and 2005, despite a 54.6% growth in production. Of the 519,917 employees in all, 27.1% are informally employed. It is estimated that in São Paulo approximately 35% of the harvest is mechanized. Therefore, harvesting, which accounts for an average of 30% of the sugarcane production costs, still uses a large number of men and machines (tows, trucks). Of the 414,668 formal jobs calculated in cane-cutting throughout Brazil, 220,517 are in the state of São Paulo (Moraes & Ferraz, 2007). It is estimated that in São Paulo almost 120,000 migrants come to cut cane, mainly from the Northeast (Ramos, 2007).

Visit to the Rural Employees' Union of Cosmópolis

"Even though one complies with the law, the workers are dying." Female worker at Engenheiro Coelho.

The group that visited the state of São Paulo had the opportunity to talk with workers engaged in cane cutting, at the Union of Rural Employees of Cosmópolis, in the municipality of Engenheiro Coelho. The union has about 4,000 members, about 1,300 of whom work cutting cane. About 25% of the members are women, who make up 10% of the cane cutters. Generally the mills refuse to hire women because their yield is lower than that of men. Most of the union workers work at Ester Mill, which belongs to the Coutinho Nogueira Group.

The workers reported to the Mission that they do not have any other options in life and are obliged to work in the sugarcane industry under hard conditions. A workday begins at 4 am, when they wake up and make their lunch; at 5:30 am they catch the mill bus; at 6 am they begin to work in the cane fields; they have lunch from 10 am to 11 am; from 1:30 pm to 2pm they have a coffee break and at 4:30 pm they catch the bus back. They emphasize that the main problem is that those who are paid by yield earn more (currently the Cosmópolis workers have a minimum wage of R\$ 500.00 and those who are paid by yield earn R\$ 2.80

⁶⁰ It is useful to compare the income of the 10% wealthiest people of São Paulo (which certainly includes the prosperous sugar cane mill owners of the state) with the income of the 40% with the lowest income in Piauí (which includes the migrants who come to cut cane in the São Paulo plantations) to give us an idea of the gulf that separates capital and labour in Brazil. The 10% wealthiest in São Paulo have an income that is 65.3 times higher than the 40% poorest in the state of Piauí (who have a mean monthly income of R\$ 69.60).

⁶¹ Data provided by Edivar Lavrati, the state leader of MST.

per ton cut). Therefore, the workers want to work as much as possible and even waive the breaks to rest, drink water or eat, in order to earn as much as possible and comply with the minimum cutting target. The lack of adequate nourishment, insufficient liquid and the excessive heat caused by working under the strong sun is added to the overly long workday. In many cases it gives the workers cramps followed by dizziness, vomiting, headaches and fainting, due to the loss of potassium and insufficient replacement of salts. The workday is so long that the cutters often suffer from diseases such as hernia, tendinitis as well as back and joint problems. Thus, the cutter's working life is estimated to be 15 to 20 years. The Mission talked with a female worker⁶² who was dismissed from her job in January of the current year because she had serious health problems such as arthritis, tendinitis and pains, since the nerves of her arm had contracted. She began to cut cane when she was 14 years old and worked for Ester Mill for 21 years. She has been feeling pain since 1995, and in 2006 the pace of her cane cutting began to slow down and her yield fell until, in the end, she was dismissed. Now she cannot even do housework (washing dishes, carrying shopping bags) because she cannot close her hands or raise her arms. The mill doctor issued an Occupational Accident Report (CAT) to ask the Social Security Services (INSS) for sick pay due to an accident at work. However, it is obvious that it is not an accident at work, but rather an occupational disease due to repetitive exertion. For this reason she is requesting a judicial expert examination to revise the CAT that was issued. This revision is important because it will later allow her to request retirement benefits due to disability. At the age of 35 years, with two small children to take care of, she will have to live on the Family Stipend (*Bolsa Família*) program while going through the proceedings at INSS.

Furthermore, the workers reported to the Mission that the protection equipment they have is not appropriate to sugarcane cutting. The gloves hurt the workers' hands; the safety glasses cause headaches because they fog over with sweat, straining the eyes. This indicates that they were not made for cane cutting. Besides, the soot caused by burning the cane provokes a lot of itching. According to the workers, the University of Piracicaba collected urine samples during the harvest and detected cancer cells due to pesticides.

The Workers' Union was founded in 1989 and since then the workers have achieved small improvements in working conditions by resorting to strikes. Therefore, for instance, the mill gives each worker a staple food basket of products (rice, beans, oil, sugar, coffee, noodles) independently of the production target. The general practice at mills is to provide staple food baskets as long as the worker meets the condition of cutting a certain amount of sugarcane. The Union controls the quality of the basket which is worth about R\$ 50.00. The basket is highly valued, especially now that the price of food has gone up a lot. However, the workers do not have

fruits and milk, which are very important to replenish the large amounts of potassium and salts that they lose while working. Another very important achievement of the Cosmópolis Workers' Union is the "closed square" cutting system, which allows the precise calculation of each worker's production. One of the great problems of the sugarcane industry, as reported by the workers, is that the workers themselves do not control the weighing of what they have cut. Generally the mills use a very complicated and non-transparent system to calculate by linear meter which is then converted into tons. The workers belonging to the Cosmópolis Union found that with their closed square system the cutters do not cut 10-12 tons of cane, as is supposedly the average, but 18-20 tons a day.

Likewise, the Union managed to get the mill to agree to do away with the outsourcing of cane cutting by 2010 (in 2006 there were 1,000 outsourced workers, in 2007 only 400). The mill has to employ the cutters directly, because the law does not allow outsourcing of the supply of workers who produce the main product of a company.

The process of organising the workers and fighting for their rights has not been easy. The Union president, Carlita da Costa reported that she has been sued twice already and was sentenced to one year in prison, one case for "larceny by fraud due to a check returned for lack of funds" and the other for "private imprisonment". A mill contractor paid a gunman to follow Mrs. Da Costa and shoot her; and also, her home was invaded. Her safety situation improved with the action taken by the Labour Prosecutor's Office.

Finally, the workers belonging to the Cosmópolis Union expressed their great concern at the unemployment that will occur due to the mechanization of the industry, presented as an answer to accusations of environmental damage caused by burning the sugar and overexploitation of work. The president of the union said: "If the mill continues putting in machines, we will occupy the mill to have a place to live." The workers were also sceptical concerning sugarcane "certification" systems, saying that they do not believe this will work in Brazil. Indeed, they say that they know the case of the VEO mill, which had is Abrinq certified as a "child-friendly mill", but had workers working 7 days with 1 day of rest.

Visit to the Pastoral Work with Migrants

"Is this a white or red sugar? It is important to have international pressure for greater human quality in this industry." Father Antônio Garcia.

The Mission interviewed Father Antônio Garcia, a member of staff of the Pastoral Work with Migrants in the municipality of Guariba. The Pastoral Work with Migrants is an ecclesiastical service designed to welcome, provide advice and carry out social and religious integration of migrants, funded by the congregations of the Scalabrini missionaries. The Pastoral Work with Migrants (hereafter called "Pastoral") of the temporary rural sector carries out its social and pastoral activities on

⁶² The female worker asked the Mission not to reveal her name.

two fronts: regions from where the migrants come and regions to which they are going. The Pastoral works in the macro-region of Ribeirão Preto, an area which, since 1985, has the largest number of mills and distilleries in the state of São Paulo due to its attractiveness to migrant agricultural labour.

When the Mission visited Guariba, the harvest had not yet started. Several mills in the region had taken their experienced workers to plant sugar cane in the Mid-West of the country, and they were only to return in May for the sugar cane harvest in São Paulo. Thus, these circumstances prevented the Mission from interviewing the workers in Guariba personally. Father Garcia told the Mission life-stories of migrants from the Northeast who come to the state of São Paulo to work. Father Garcia pointed out that there are no records or precise statistics concerning the number of workers and from where they come. He emphasized that the living conditions in the Northeast have deteriorated to such a point that among the cane cutters there are even elementary school teachers who prefer the hard work of cutting cane to the low pay of teaching. He reported how the workers are recruited by the *gato*, the middleman who employs the workers for the mills. The workers come "tied" to the *gato*, which means that they have no way of comparing working and payment conditions between different mills; they have no negotiating power. The *gato* is seen as a "necessary evil", because without a middleman the migrant has no way of reaching the region. The *gatos* work behind the façade of a "travel agency" in the Northeast. After the contract is signed with the mill people still depend on the *gato*, because he lends money and provides other services to the workers, and he charges a lot for this. As Father Garcia sees it, the arrival of the migrants demobilizes the whole union organization in the region; it is an army of replacement labour. That is why the mills do not invest in labour. The migrants do not question housing, health, the amount of work, the payment. They say: "Father, what is little here is a lot there, I came here to work, not to quarrel."

In São Paulo and also in Minas Gerais, the mill owners prefer workers employed by middlemen in their regions of origin (Piauí, Maranhão) and reject local workers. The mill owners' choice is a result of the fact that as these workers are migrants, they are more vulnerable and thus tend to accept intense levels of exploitation and low wages without complaint. This segmentation according to geographical origin also covers up an ethnic labour division, since most of the migrants are black and *pardo* (mulatto) (Silva, 2007, p. 67). The migrants, who have generally been expelled from their regions of origin, where they practice subsistence agriculture, are heavily indebted when they reach the sugarcane region, and they are controlled by the contractors. This situation creates conditions for an immeasurable intensification of labour exploitation and for the practice of slave labour⁶³.

63 In São Paulo, in 2006, a protocol of intention was signed between UNICA and the Federation of Rural Wage Workers of the state of São Paulo (FERAESP) which includes the elimination of intermediaries by 2011.

As to the workers' living conditions, Father Garcia highlighted that most of the people live in huts, which are rooms or houses on the cities' outskirts, where the migrants pay rent (R\$ 50.00 per person!). The sanitation of the huts is awful. The Pastoral and the Public Prosecutor's Office demanded that the mills and city administration control the quality of the huts (*barracos*). However, the people who own the huts earn a lot of money from rent at the expenses of the workers. Since the hut owners vote and the migrants do not vote, the city administrations tend to neglect their obligations to the migrants.

Other workers live in lodgings at the mills. Fifteen years ago the accommodation was no better than concentration camps. After reports of the terrible living conditions in the accommodations and the difficulty of companies in dealing with large groups of people living in an accommodation, there are now only five accommodations left, holding 200-400 men in rooms with four bunks. The workers complain about living conditions in the lodgings and that they are far from the city. Even though the food offered at these accommodations has improved, they still are a "powder keg".

Regarding the food given to the workers, Father Garcia said it is very bad. Due to the appalling living and sanitary conditions the workers cannot prepare the food they need (they do not have cupboards nor refrigerators in which to keep food or clean areas in which to cook). Moreover, the high work load and lack of family support also lead to a bad diet. Besides this, they buy food on credit in the local shops, which is more expensive for them in the long run.

The Pastoral has been given special attention to the matter of sugarcane cutters dying of fatigue. Since 2004 the Pastoral has monitored 20 cases of deaths of migrant workers employed at the mills in the interior of São Paulo. Through contacts with the families of the deceased, the collecting of information in the regions from which the migrants come and from the press, the Pastoral has sent the cases to the Labour Prosecutor's Office (MTP), to have the circumstances of those deaths investigated. The complete list of the 20 workers who died is in the table below.

BRIEF HISTORY OF DECEASED SUGARCANE CUTTERS IN THE SÃO PAULO SUGARCANE INDUSTRY

By Sister Inês Facioli, mscs – Father Antonio Garcia Peres, cs
February 14, 2008

CASES IN 2004:

- 1) **José Everaldo Galvão**, 38, born in Araçuaí-MG, died April 2004, at the Macatuba-SP hospital. Cause of death: cardio-respiratory arrest. Buried in Araçuaí-MG.
- 2) **Moisés Alves dos Santos**, 33, born in Araçuaí-MG, died April 2004, at the Valparaíso-SP

hospital. Cause of death: cardio-respiratory arrest. Buried in Araçuaí-MG.

- 3) **Manoel Neto Pina**, 34, born in Caturama-BA, died May 2004 at the Catanduva-SP hospital. Cause of death: cardio-respiratory arrest. Buried in Palmares Paulista-SP.

CASES IN 2005

- 4) **Lindomar Rodrigues Pinto**, 27, born in Mutans-BA, died March 2005, in Terra Roxa-SP. Cause of death: respiratory arrest. Buried in Mutans-BA.
- 5) **Ivanilde Veríssimo dos Santos**, 33, born in Timbiras-MA, died July 2005, in Pradópolis. Cause of death: pancreatitis. Buried in Pradópolis-SP.
- 6) **Valdecy de Paiva Lima**, 38, born in Codó-MA. Died at São Francisco Hospital in Ribeirão Preto, July 2005. Cause of death: hemorrhagic cerebral accident. Buried in Codó-MA.
- 7) **José Natalino Gomes Sales**, 50, born in Berilo-MG, died August 2005, at Batatais-SP hospital. Cause of death: cardio-respiratory arrest. Buried in Francisco Badaró-MG.
- 8) **Domício Diniz**, 55, born in Santana dos Garrotes-PE, died September 2005, on the way to the Borborema-SP hospital. Cause of death: unknown. Buried in Borborema-SP.
- 9) **Valdir Alves de Souza**, 43, died October 2005 in Valparaíso-SP. The body was autopsied in Araçatuba. (News reported in Folha de São Paulo on 10/23/2005).
- 10) **José Mario Alves Gomes**, 45, born in Araçuaí-MG. Died at Rio das Pedras, October 2005. Cause of death: unknown. Buried in Araçuaí-MG.
- 11) **Antonio Ribeiro Lopes**, 55, born in Berilo-MG, died November 2005 in Guariba-SP. Cause of death: pulmonary hemorrhage and decompensated dilated cardiopathy. Buried in Guariba-SP.

CASES IN 2006

- 12) **Josefa Maria Barbosa Vasconcelos**, 42, she had been hospitalized on April 12, 2006 at the Regional Hospital of Teodoro Sampaio due to breathlessness and general body pains. On the 13th she died, and the family registered a police report for medical negligence, because the cause of death was not clearly defined. (News reported by Agência Estado).
- 13) **Juraci Santana**, 37, born in Elesbão Veloso-PI. Died June 2006, in Jaborandi-SP. Cause of death: reasons unknown. Buried in Elesbão Veloso-PI.
- 14) **Maria Neusa Borges**, 54, lived in Monte Alto. Died July 2006. Cause of death given as unknown. Buried in Monte Alto.
- 15) **Celso Gonçalves**, 41, died in July 2006 in Taiacu-SP. Cause of death: unknown. Buried in Monte Alto-SP.

- 16) **Oscar Almeida**, 48, died September 2006 in Itapira-SP. Buried in Conchal-SP. Felt strong chest pains and fainted while working. Buried in Conchal.

CASES IN 2007

- 17) **José Pereira Martins**, 51, born in Araçuaí-MG, living in Guariba-SP, died March 2007. Buried in Guariba. Cause of death: myocardial infarction.
- 18) **Lourenço Paulino de Souza**, 20, born in Arixá do Tocantins-TO and lived in Colina-SP. Died April 2007. Cause of death: unknown. Buried in Vila Tocantins-GO.
- 19) **José Dionísio de Souza**, 33, born in Salinas-MG, lived in the town of Ipaussu-SP. Died June 2007. Cause of death: unknown. His body was taken to the village of Fruta de Leite-MG.
- 20) **Edilson Jesus de Andrade**, 28, born in Tapiramutá-BA, died September 2007, in Guariba. The death certificate issued by the hospital names as cause of death an autoimmune disease called idiopathic thrombocytopenic purpura. Buried in Guariba.

Based on these reports, Father Garcia found that there has been a relative improvement in working conditions; the companies are ensuring that a lot of publicity is given to the supposed improvements. MPT is also carrying out better inspections and fining the companies; they are really committed. Where there are combative workers' unions there is a relative improvement in working conditions, but there are only local agreements, no state-wide agreement. These actions have alerted the companies and they are now paying more attention. "We owe much to the committed press, a new generation of reporters is at work" said Father Garcia. There have been many news reports in this region questioning the system. Likewise, the National Rapporteur on the Human Right to Work (Costa & Neves, 2006) held a public hearing in the region in 2005, followed by another 14 hearings by MPT and the State House of Representatives. The following was achieved: breaks during work, coffee and bread for the workers, a tent to protect workers from the sun to make lunch. Father Garcia was emphatic in stating that the structural causes of overexploitation of labour still exist.

Father Garcia also talked about the dilemmas involved in doing away with the burning of sugarcane for environmental or health reasons. He highlighted that for the workers, if there is no burning, there will be mechanization and unemployment. Burning is necessary for the workers. One machine eliminates 80 jobs. The workers want clean cane and also to keep their jobs. Mechanization creates a problem by compacting the soil. Hand-cut cane creates four to five harvests whereas with mechanization there are only three harvests, due to compaction and damaged roots and the cane grows back flawed. Besides, the machine tire is very wide, and

the alignment of the cane planting must be redesigned. Mechanization is taking place at a very fast pace. The São Martinho mill is leading mechanization in the region.

Finally, Father Garcia referred to changes in agricultural production currently ongoing in the state of São Paulo. For instance, the expansion of sugarcane led many small and medium orange farms to lease their lands. The large ones are partners in the orange agribusiness and do not sell. In other regions in the west of São Paulo, cattle ranchers lease their lands to the mills and rent or buy new lands in the Mid-West. The mill will only take leases for a minimum of five years. There were small and medium orange growers, swept along by promises that cane/ethanol would save them, who uprooted their 8-year old orange groves, which were producing, in order to grow sugarcane. But the price of sugarcane was R\$ 68.00 per ton, and went down to R\$ 28.00 per ton. The leasing of land depends on the price of sugarcane, and there is no fixed price. Anyone who wishes to rescind the contract must wait for nine years: five until the contract to expire and four for the new orange trees to begin to bear fruit. The price of meat has gone up. In the Assis region, the farmers who leased soybean and corn lands for cane now saw the prices of this produce has exploded. Beans are practically not produced any longer in the state of São Paulo. The price has risen enormously and a sack costs R\$ 145.00.

Visit to the Federation of Wage-earning Rural Employees in the State of São Paulo (FERAESP)

“The competitiveness of Brazilian alcohol on the domestic and foreign market is only possible because of the large subsidies given to the industry by the workers, the environment and society.” Elio Neves, president of the FERAESP.

The Mission interviewed Elio Neves, president of FERAESP, and Geni Vieira de Oliveira, advisor, at the union headquarters in the municipality of Araraquara. The Federation has about 70 affiliated unions and represents about 300,000 workers, of whom and estimated 180,000 are working in the sugarcane industry. FERAESP was founded in April 1989, and it was only legally acknowledged in 2001, which required a decision by the Supreme Court.

During the interview given to the Mission, the union leader summarized the main problems of the cane cutters as follows:

First of all, Mr. Neves questioned the type of relationship established by the sugar and alcohol production model with society and with the workers. He said that ever since sugarcane arrived in Brazil, there have been achievements in technology and production, but that the labour relationship continues to be archaic. It is a production model that concentrates income and promotes social exclusion, establishes a predatory relationship with the environment, and subordination of political action to the business/private interests.

As a result of this, the relationship with the workers is

extremely perverse. Some kind of change is achieved when the scandals hit the media, but the biggest problems do not rise to the surface as the media covers them up, the government does not inspect much for compliance and public policies support large investments in the sector without any kind of social requirements. Low pay, lack of control in weighing the cane by the workers, long workdays, inadequate housing, very bad food, lack of health and safety at work, a set of rules that is not complied with to any great extent. Non-compliance is the rule, compliance the exception. Many entrepreneurs owe social security and do not pay, expansion takes place based on non-charging for the debts and opening of new credits. What kind of social pact is there? What do society and the workers receive? It is not even an achievement; it is a matter of ensuring what the law already guarantees. Examples: as to the workday, the Federal Constitution defines an 8-hour workday and a maximum of 44 hours per week. Workers do 12 plus hours a day and work more than 50-60 hours a week. Some sectors within the industry reach up to 14 hours a day. The speed imposed on the organization of rural manual labour corresponds to the need established in the industrial process. The association of machine-man productivity, where a man who does not balance the productivity of the machine is excluded. The industry employs healthy young workers who are discarded after five harvests. There are serious health problems and the workers are at the mercy of the public health system and social security.

According to Law 4,870/1965, companies should invest in social assistance schemes for the workers to the amount of 1% of the official price of the ton of cane delivered to the mills by the suppliers or farmers, 1% on the official price of a 60-kilogram sack of sugar, or 2% of the official value of a litre of alcohol. The mill owners say that the law is no longer valid, they have been accumulating the profit on the spreadsheet since 2001, and the government does not demand compliance with these obligations. Recently FERAESP, with the support of the Public Prosecutor's Office, managed to get the federal courts – through a sentence of February 29, 2008, from the Federal Court of Araraquara – to order 8 mills to comply with the Social Assistance Plan required by law.

The mills have accumulated huge debts to social security. The total of the debts has not been calculated as the information is confidential. The Maringá mill, for instance, has a debt of R\$ 400 million, which is currently in foreclosure by the courts, while the mill itself is only worth R\$ 200 million. Payment by production of cut cane transfers the risk of the activity to the workers. “Any mechanism which induces the worker to forced labour, even if it is legal, is immoral” stated Mr Neves.

There is massive non-compliance with environmental law, for instance, with regard to maintaining Permanent Preservation Areas (APP), preserving 20% of the properties with forests (legal reserve). The mills dig deep wells and use the water to wash the cane which pollutes

surface waters. There is no environmental impact study of the Guarani Aquifer, one of the largest reserves in the world, which is being overexploited by the sugar and alcohol industry. "You degrade the planet and say that alcohol preserves the environment?" added Mr. Neves.

Prices for rice, beans and other foods are higher. Beans cost R\$ 10.00 per kilogram. In the sugarcane regions there are no other crops, because of the pesticides that are sprayed from aeroplanes. The lands formerly dedicated to producing food are now beginning to produce fuel. The workers in the land reform settlements are leasing their lands for the mills to plant sugarcane.

The union leader emphasized that FERAESP works to improve the sugarcane workers' labour and living conditions in the short term. However, the Federation has serious doubts as to whether cane cutting will ever become worthy labour, since the conditions under which this activity is carried out are very hard for the workers. In this sense, over the medium and long term, FERAESP considers it strategic to work for land reform that will give the workers (of both genders), their families and communities the prospect of a worthy life. In fact, thanks to the settlements that FERAESP was able to achieve, the rural population of Araraquara has grown. In all, there are about 3,000 families connected to the Federation in settlements in municipalities such as Bela Vista, Mutuca, Pradópolis, Jaboticabal, Pitangueiras, Bebedouro, São Simão, Boa Esperança do Sul and Bauru. FERAESP is very concerned about the pressures of the mill owners to get the settled families to lease their lands, and they, due to the lack of adequate support for production, give in to the mill owners' offers.

Finally, Mr. Neves reported to the Mission that his union has been victimized by illegal intimidation. In February 2007, the head office of FERAESP was surrounded by the Federal Police, their computers were seized, the accounts embargoed and Mr. Neves was arrested. But there was no complaint, no accusation or lawsuit. Mr. Neves pointed out that struggling for freedom to organize is rather hard.

Visit to the Sepé Tiaraju Settlement

"What conspires against democracy in this region is the power of the sugar and alcohol industry, which concentrates the land, promotes cultural domination by imparting the idea that development depends on the sugar and alcohol industry." Dr. Marcelo Goulart, Public Prosecutor, Ribeirão Preto.

In order to obtain information on the state of the implementation of the land reform, the delegation visited the Sepé Tiaraju Settlement, of the Landless Rural Workers Movement (MST), in the municipality of Serrana. The settlement consists of four groups of 20 families distributed over 700 ha of land.

MST arrived in the region in 1999 and began to raise the issue of the social function or role of property, to question the large properties, the mode of production based on the monoculture of industrialized sugar cane,

with intensive use of pesticides, at the same time as there was unemployment in the cities, and the countryside was becoming practically empty of peasants. The lands in Ribeirão Preto are productive, but many of them can be expropriated for purposes of land reform, due to environmental and labour debts. Thus, MST began to occupy lands of mills that had accumulated large social security debts with INSS. The first land occupations were done carried out by cane cutters and people from the outskirts of cities, but, due to the lack of experience in recovering lands and internal conflicts, the experiment did not work out.

In 2000, 300 families organized by MST occupied the lands of the Santa Clara Farm, which is now the Sepé Tiaraju Settlement. Because of debts due to social security taxes, the land of the Santa Clara Farm had already become the property of the state of São Paulo in 1992, but the landlord continued to be in possession of the land. The landless camp was evicted 11 times using shock police, until the families found out that within the farm there was an area of public lands which belonged to the RFFSA railroad, and there they camped until the whole process of expropriating the land was concluded, and the settlement was formalized in 2003. The settlement was registered as a Sustainable Development Project (PDS) to ensure collective ownership of the land. In the state of São Paulo, MST has five settlements regulated as PDS. Fifty per cent of the lands are for individual use, and the other 50% for collective use.

The settled families did a lot of work to recover the environment of those lands. First of all they are recovering the sources of water. In the 1960s, there were more than 20 springs in the area, but because of the use of heavy machinery and the zeal to cultivate every centimetre of the land with cane, the springs were mostly buried. Currently there are only three springs, and work is being done to recover the others. The families are also recovering the legal reserve and reforesting the riverbanks with native species. Indeed, the families have an agreement with EMBRAPA to leave 45-50% of the settlement lands under forest, i.e. 25% more than required by law. The soils have also been recovered using agro-ecological techniques. All of the production is performed using native seeds and in an agro-ecological manner.

The settlement ensures that everyone has food. They produce corn, cassava, vegetables and fruits, they raise pigs and have a small farm (*granja*), and a surplus of 15 tons of cassava a week is sold to CONAB through the Program for the Acquisition of Food (PAA); they sell to markets; they sell organic baskets to the city and are trying to make it possible to have organic markets for the low income population; they also sell at the roadside. The families in the settlement are opposed to integrating production with the agribusiness and are aiming for an autonomous, independent project of peasant family farming to produce foods and protect the environment. The settlement is able to access education services in Serra Azul (12 km), with school transport. Health care

takes place in Serrana, 12 km away. It has electricity and drinking water (without piping).

Since the settlement is surrounded by sugarcane plantations, they face a serious problem as the fumigation of the sugarcane affects their crops. Moreover, many young people do not see agriculture as a choice for their lives. The settlement wants to process products, generate greater income by transformation, and look at other life options for those who do not want to become farmers.

Visit to the Mario Lago and Antonio Gramsci Camps

In the municipality of Ribeirão Preto, the Mission visited the Mario Lago Camp of 300 families, and the Antonio Gramsci Camp of 18 families. Both camps are on the lands of the Barra 1 and Barra 2 farm. The Barra farm had been sued for deforesting a legal reserve and for other environmental damage and based on the official expert reports from the Public Prosecutor's Office and Ibama, INCRA requested expropriation, but here were several attempts at obstructing the process. The farm belonged to the Junqueira family, one of the most traditional large landowner families in the state. MST heard about the administrative proceedings of expropriation that had run into delays, and, in order to exert pressure, they brought over 500 families to occupy the neighbouring property in April 2003. There were several repossessions and new occupations. With the change in the federal government the process has been speeding up. The Movement has articulated the democratic forces of Ribeirão around the banner of land reform. There is a debate in the city, which involves several sectors of civil society. The environmental issue (water, burning, Guarani Aquifer recharge area) is a concern to civil society. Increased unemployment is apparent due to the mechanization and because of the increase in the low income areas around the cities, all issues which require a response from the authorities.

The camps are undergoing a process of becoming established settlements, although they are already producing food. The families plan to leave 45% of the area as a legal reserve. Each family will receive areas for individual use and there will be collective areas. Since the settlement areas are heavily disputed for sugarcane leases, the settlers have made an agreement with the court (TAC) that nobody will lease. At the Mario Lago camp, they decided that the plots cannot be transferred individually without an agreement with the community. According to Edivar Lavratti, the state coordinator of MST, there are currently about 1,400 families in 20 camps throughout the state of São Paulo. In the metropolitan area, 10 settlements are now in the process of being organized.

4.2. GUARANI KAIOWÁ INDIGENOUS PEOPLE, MATO GROSSO DO SUL

A Mission team visited the state of Mato Grosso do Sul, to look at the impact of expanding sugarcane production for ethanol production on the right to food and land and at the labour rights of the Guarani Kaiowá indigenous

communities, in the municipality of Dourados.

In Mato Grosso do Sul, sugarcane crops began to be planted at the end of the 1970s, with incentives from government programs such as Próalcool. In the beginning of the 1980s, the first mills for sugar and alcohol production were installed. According to data from the State Department of Production and Tourism (SEPROTUR), published in the *Campo Grande News* newspaper on May 14 2007, in the first sugarcane harvest in MS, in 1984/1985, the total harvest was about 2 million tons. Today, according to the same data, in 2006 and 2007, when 11 mills have been installed, 6 million tons of cane was harvested in an area of 170,000 hectares. This harvest enabled the production of 575,536 tons of sugar and 640,843 m³ of alcohol, generating 25,500 direct jobs and 102,000 indirect ones. However, the prospect of expansion of the cane crop in Mato Grosso do Sul is impressive. According to the data already published, a total of 68 mills are supposed to be set up in the state, 29 of them are already in the process of becoming installed, and 28 still under negotiation. According to the Secretary of State, Tereza Cristina, each mill generates jobs for 600 people. According to the Secretary's forecasts, the mills will generate about 180,000 direct jobs and 800,000 indirect ones. Currently, 60% of the production is for alcohol and 40% is in sugar. Today sugar cane production in the state accounts for 3% of the total Brazilian production. This expansion of sugarcane will require 200,000 hectares. It should be highlighted that the state government provides strong incentives, with full exemption from the Value Added Tax on Sales and Services (ICMS) for 15 years, to mills that are established in the state, using the argument that they will create jobs.

As to the situation of the indigenous peoples, from the 1980s onwards, indigenous labour began to be used in the cultivation of sugarcane. The alcohol industry quickly hit the headlines, due to the reports of slave labour and exploitation of indigenous labour. A Report of the National Foundation for Indigenous Peoples (FUNAI) from 1983 mentions the presence of several school age children and women cutting cane. Since then, between the months of February to November, only women and children are left in the villages, because the men are working on the sugarcane crops. It was only in 2000 that it became mandatory for a work card to be signed for indigenous workers. In 2003 the Permanent Committee for the Investigation and Inspection of Slave Labour Conditions in Mato Grosso do Sul was established. This Committee, with 30 government and non-government representatives, has regularly monitored working conditions in the mills. But accusations of slave-like or degrading work continue.

Because of the lack of food and other alternative sources of income, many indigenous individuals are obliged to work in cane cutting⁶⁴. The *Campo Grande News* of May 14, 2007 announced that 409 workers had

⁶⁴ There are 10,000 indigenous workers in the mills of Mato Grosso do Sul and 1,500 in the village of Dourados, which was visited by the delegation.

been rescued from a distillery after having been found working in degrading conditions. One hundred and fifty of them belonged to indigenous groups.

The Guarani Kaiowá of the State of Mato Grosso do Sul, with a total population of 27,500, have been facing serious food shortages and social problems. In the last three years, more than 35 children died from malnutrition, several people were murdered and others committed suicide, and many became alcoholics. Besides these deaths caused by hunger, it is estimated that in Mato Grosso do Sul malnutrition affects at least 600 children as a result of insufficient food and the lack of territory which would allow the Guarani Kaiowá food culture to be preserved.

At the root of this situation is the lack of land and access to food, which is the consequence of the theft and destruction of the traditional territories of the indigenous peoples. Since colonisation there has been a process of violence against Guarani Kaiowá people, which has prevented them from living according to their culture. This situation will become worse when all the sugarcane mills planned in the state in the next three years are put in place. It is evident that the process of identifying the indigenous lands will be delayed due to the interests of the landowners, since an area of 200,000 hectares is needed to expand production of sugarcane.

The situation of Guarani Kaiowá's lands

After the Paraguay War *Erva mate* (*mate*, *Ilex paraguaiensis*) became the most important economic export product. As a consequence, a large part of the territory belonging to the Guarani people was leased to an *erva mate* company (Mate Larangeira), with Argentine capital that held the monopoly on exploitation between 1892 and 1940. The company did not own the land, but had the right to exploit it.

The Kaiowá population was used to cultivate *erva mate*. At that time – between 1915 and 1928 – small areas of land were demarcated for use by the indigenous population (18,125 inhabitants).

Between 1928 and 1980, the policy of the Paraguayan government was to concentrate the dispersed indigenous people into small demarcated areas in order to make colonization easier. During this period, many portions of the territory inhabited by the Guarani people were purchased by farmers, who were given land titles to the small land-holdings by the government. These farmers cut down the forests and set their farms hiring the Guarani population as labour. This incorporation of the Indians into the farms lasted until the 1970s. But in 1970 soy beans and mechanization came along, and the need for labour began to diminish. During this period there was great pressure for traditional villages to be emptied, and thus the population on the reservations grew, putting pressure on the environment and beginning a phase of problems caused by population agglomeration.

In the 1970s and 80s the Council for Mission among Indigenous People (CIMI) began to work in the region.

The purpose of this organization was to work with and organize the groups that lived on the areas belonging to the farms, so that they could begin to reclaim their lands. In 1973 the government enacted the Indian Statute (see 3.4.2 above), a federal law that orders the government to demarcate the lands belonging to the indigenous peoples. This law allowed the recovery of 22,000 hectares of land, which was in the hands of third parties (landlords) (1980-90). The social organization contributed to a large extent to this process. Although there is no longer a conflict over these 22,000 ha, the problem of the population agglomeration and scarcity of land has not been solved. Currently, most of the population is still located on the 18,000 ha demarcated before 1928. At present the demarcation of about 165,000 ha already identified is pending. In the regions of the state closest to the Paraguayan border, indigenous groups have occupied the land which has led to open conflict in these areas.

According to reports from social organizations and academics, land prices are rising due to the construction of new mills to produce alcohol. This information is confirmed by the FNP Institute, a consultant specializing in agribusiness. In 2007 the Institute said that during a 12-month period, the price of land to plant sugarcane had risen by 67.4% in Chapadão do Sul and by 61.5% in Três Lagoas, both of them municipalities of Mato Grosso do Sul (*Valor Econômico*, 2007). The mission was also informed that many of the owners of lands surrounding the indigenous villages are politicians in Mato Grosso do Sul, which points to a major concentration of political and economic power. Sugarcane production is also based to a great extent on leasing land from the local proprietors to newly constructed mills. Additionally, the mission was informed about a process by which land is being bought by foreigners, something that is happening not only in the state of Mato Grosso do Sul, but throughout the country, and is related to the expansion of the sugar and alcohol industry (see 3.2). The massive purchase of land by foreigners has led to the land prices in the state of Mato Grosso do Sul to become the highest in the country. INCRA's president acknowledges that, besides the fact that the country does not have any control over the purchase of lands by foreigners (see page 40-41), this situation also causes problems for the government in the purchase lands for land reform. He actually mentioned an example in Mato Grosso do Sul: in the town of Naviraí, two farmers did not sell their lands to INCRA because they received better offers from foreign buyers (see Quadros, 2007).

The demarcation of Guarani Kaiowá lands is supposed to be among the priorities of the State, but so far no results have been achieved. The priority of the social organizations has been to pressure the state to guarantee, speed up and implement the process of demarcating the lands that belong to the Guarani Kaiowá people. In this sense we can say that the regional economy has turned predominantly to the production of sugarcane for fuels, and that this fact has made the demarcation process

difficult. The agency in charge of this process is FUNAI⁶⁵. According to the coordinator of this agency, there are still 35 areas under discussion. Studies to confirm that these areas are part of the Guarani Kaiowá territory have been delayed. They were supposed to start by mid April, 2008. FUNAI has been monitoring the situation in 38 villages and 18 camps. It also works on the demarcation of six rivers which the indigenous people recognize as part of their territory.

Land and agrofuels

It is clear that sugarcane production is putting stress on the legal and political process of demarcation of indigenous lands in Mato Grosso do Sul and, therefore, limits the Guarani Kaiowá's access to their land and natural resources.

For about two years, a new sugar cane boom has been going on, which is advancing onto the fertile lands of the Guarani Kaiowá people, putting energy crops and food production of this population into direct competition. The population are now condemned to live in an area of land that is insufficient to feed all of its inhabitants.

The Kurussú Ambá Camp

The camp is in the municipality of Coronel Sapucaia, next to the territory of "Taquaperi village", which was demarcated in 1940. 46 families live in the camp and they are demanding the recognition of the indigenous land of Kurussu Ambá, the current Madama Farm (soy beans). The families left the demarcated territory because of a family conflict with another family group. As they did not have access to the traditional land, nor can they return to the demarcated territory because of the conflict, they are forced to live in a roadside camp. They want to make another attempt at entering the traditional land, risking their lives, because they do not see any other possibilities.

Work and jobs

Until the 1970s, indigenous people worked on the farms neighbouring their lands. The mills began to arrive at the end of the 1980s, and the Guarani Kaiowá labour began to be directed towards the sugar mills. The form of work at the mills has traditionally been slave-like. Generally, the worker stays at the mills for 50 to 60 days in a row, causing a major absence of men from the villages, a factor which was identified by several people with whom we talked as causing increased violence. However, work at the mills has become an alternative source of income for the Guarani.

⁶⁵ The National Foundation for the Indigenous Peoples is the Brazilian government agency which establishes and carries out the Policy for the Indigenous People Brazil, performing what is required by the 1988 Constitution. In practice this means that it is up to FUNAI to promote the identification and demarcation of the indigenous lands, basic education for the indigenous people, demarcating, ensuring and protecting the lands traditionally occupied by them and stimulating the development of studies and surveys on indigenous groups. The Foundation also has the responsibility of defending the indigenous communities, of raising the awareness of Brazilian society about the indigenous peoples and their causes, of managing their patrimony and inspecting their lands, preventing predatory actions of prospectors, squatters, sawmills and any others that occur within their territories, which might be a risk to the life and preservation of these peoples.

There is a historical connection between the mills and slave labour. Mills traditionally have over-exploited labour in the form of slave labour, semi-slavery or other modern forms of slavery. However, there is currently greater visibility of these labour rights violations due to constant reporting since 1980. At present new mills are being built in Mato Grosso do Sul. Currently there are 11 mills operating and 43 being built or authorized to be built before 2010. Generally they are located near the villages.

A polemical issue is the obligation to mechanize the mills from 2012 onwards. In this sense the dependency that has been established on income obtained by working with sugarcane may produce serious subsistence problems among the Guarani Kaiowá population, as manual labour will be replaced by machines. In some villages, mechanization has been reducing labour by 50 per cent. The question is what are the workers supposed to do when they can no longer work in the mills?

According to professor Antônio Brand, of the Universidade Católica Dom Bosco who is responsible for research on "Territory and tradition in the historical processes of the Kaiowá Guarani in Mato Grosso do Sul", the money that enters the villages from the mills does not necessarily lead (for cultural reasons) to a planned calculation of expenditure, and therefore food security is not guaranteed by this income. According to Brand, "the problem of malnutrition is not due to the fact that the Guarani do not earn money. In many villages, the average monetary income of the family is R\$ 300.00 a month. Part of the money goes to food but to too many other things as well".

As for the argument about creating jobs in the alcohol industry, it is estimated that of the 1,100 jobs in a mill, 800 are seasonal, and only 200 are permanent jobs.

In relation to slave labour, the State Labour Prosecutor's Office works in the following five priority areas: Eradication of child labour and legalization of indigenous work, fighting all forms of discrimination at work, preservation of workers' health and safety, and legalization of work contracts.

The "Permanent Committee for the Investigation and Inspection of Working Conditions" in the state of Mato Grosso do Sul is also very important. This is a forum of organized civil society (unions, universities, churches) and government entities that was started due to the high number of reports of slave labour.

In February 2008, at the State Labour Prosecutor's Office, a work centre was created for the sugar and alcohol mills. The State Labour Prosecutor's Office has five attorneys responsible for monitoring all mills in the state. The most important instrument they have is the Term of Conduct Adjustment (TAC) which is an agreement between the Office and the company affected to avoid legal action. The TAC establishes a time period for the company to eliminate the problem, and if it doesn't, it is fined. All reports against mills are registered at the State Labour Prosecutor's Office.

The "black list" (see 3.4.3) is a list in which a mill is

included only when it has been proven that the mill uses slave labour. In Mato Grosso do Sul, most mills are not on the “black list”. The most problematic mill in the region is Usina Debrasa, where 1,011 slave workers were released at the end of December 2007. The company belongs to the José Pessoa Group, which also has mills in Pernambuco, Rio de Janeiro and São Paulo.

Among the most frequent reports received by the State Labour Prosecutor’s Office are the fatiguing workday, unhealthy accommodation, indigenous child labour and false documents. With the sugarcane boom, some labour problems became more acute, such as a increased incidence of indigenous child labour, the counterfeiting of documents to enable to employment of minors, and the presence of indigenous women among the cane cutters. According to CIMI, in 2007 1,011 indigenous slave labourers were released from the mills in Mato Grosso do Sul. Violence and prostitution are also becoming worse with the arrival of migrant workers from the north of the country. Likewise, pressure on labour in the sugarcane industry produced an extension of the harvest period from six to eight months.

“Although it is illegal, the recruitment of indigenous youth – with false papers – to work cutting cane is common in Mato Grosso do Sul. There is a great demand for these workers because they work well at low cost. With the great demand the adolescents are often recruited, says the former chief prosecutor of the Public Labour Prosecutor’s Office (MPT), Cicero Rufino.”

In March 2007, the Dcoil mill was caught in the act by a raid carried out by the Mobile Inspection Group of MPT, in which 498 workers were released, 150 of them indigenous. All 150 were lodged in a large hut without windows, with space for at most 90 people. There was a lack of adequate working equipment, and payments had been delayed. After the raid Dcoil had to pay a fine and signed a Term of Conduct Adjustment (TAC) in which it promises to improve the situation of the workers” (quotations from Navarro, 2008, p. 5)

The mills pay according to production. The representatives of the Rural Workers’ Union of Rio Brilhante say that it would be impossible to establish a fixed salary, due to a tradition of payment by contracted work and competition to see who cuts the most cane. Thus, in recent years, besides an extension that occurred during the harvest season, the daily productivity of workers has increased remarkably. The union structures at the mills are really weak, due to payment per productivity and to the fact that most of the workers in Mato Grosso do Sul are migrants from the Northeast of Brazil.

In conversations with inhabitants of the indigenous communities in the neighbourhood of the mills, the Mission was informed that the mean monthly income of the indigenous workers at the mills is R\$ 600.00, of which they owe about R\$ 200.00 to the mill canteen for food, and take home to their family only about R\$ 400.00 a month.

Although there is a policy decision to mechanize sugar cane harvesting, the new mills which to be constructed will require a lot of labour which will be supplied to a large extent by the indigenous workers. IBGE foresees an increase of 30% in sugarcane cultivation during 2008 (from 199,700 ha in 2007 to 260,000 ha in 2008), in Mato Grosso do Sul.

Remarkable is also the fact that according to CIMI, in the state, 205,000 ha of land are being used by organized criminal groups for money laundering, which is five times more land than the Guarani Kaiowá currently control (40,000 ha).

Cultural and social impacts of scarce land

Since 1980, there has been a clear and constant increase in the number of suicides within the Guarani Kaiowá villages and camps that, according to the people with whom we talked, are related to the pressure on the land, hunger and water supply problems. Today between 40 and 50 cases of suicide occur each year among the Guarani Kaiowá population. There are also problems that did not exist in the past, such as violence against women and children.

According to anthropologists, the lack of land greatly weakens the traditional forms of social control. The causes of increased crime and violence are closely connected to the lack of land and natural and symbolic resources that are part of their “territory”. These elements are unfavourably complemented by situations of unemployment, labour exploitation, lack of future prospects for the young and the direct violence inflicted on the indigenous people by local farmers and politicians.

In this sense, the demarcation, confirmation and return of the lands must be accompanied by technical training, holistic policies of socio-cultural reorganization, land reform, investment in agricultural production and access to the Program for the Acquisition of Food. This program also contains admission criteria that exclude many indigenous people (being recognized as a small farmer by technical validation, having identity papers, having a bank account, identifying the amount of hectares they work.)

The Guarani Kaiowá people, however, have been carrying out a process of cultural resistance to this oppression. Part of this process is the new value assigned to traditional languages, the religious authorities, rituals and traditional forms of integration and social organization. The fact that at the Dom Bosco Catholic University in Mato Grosso do Sul there are an increasing number of academics of indigenous origin (about 500 in all, seven taking masters degrees, and one taking a PhD) is producing a qualitative increase in the demands made by this population as a way of facing the internal problems and dialoguing with the State institutions. The right and access to education are, for this reason, one of the issues demanded by these communities.

Situation of food, health and housing

The year 2004 was an inflection point in the reality of the Guarani Kaiowá people in Mato Grosso do Sul. That year, there was a peak in malnutrition and child mortality. From 2005 onwards all of the population of the villages began to receive the “staple food basket” from the food aid program. This program was provided by the state government and the national government. In 2005 the state government withdrew from the program, producing another peak of child mortality. Between 2002 and 2007 there was a reduction in child malnutrition due to increased coverage and follow up by the National Health Foundation (FUNASA). This institution identified the reappearance of diseases which had already been eradicated and are related to dietary problems, such as diabetes and tuberculosis. However, FUNASA has fewer and fewer staff; previously one person would assist 60 families, now one person assists 120 to 140 families, greatly reducing the preventive capacity.

In interviews held in the villages, it could be verified that the staple food basket is the main food source of the population. Food from their own crops (cassava, corn, beans) constitute a very limited percentage of their diet and some do not cultivate anything at all, since they do not have enough land to do so.

Traditionally the Guarani Kaiowá population produced, besides cassava, corn, potatoes, bananas and fish. These activities are kept up in a few of the more isolated villages, for instance in the municipality of Yporá, but not in those which are now close to the mills. In these areas practically no food production occurs and people depend greatly on the “staple food basket” program (now provided exclusively by the federal government), which is a program designed to help in emergency situations, but which has become a permanent program. Therefore, its content is inappropriate and scarce (originally 36 kg, and now only 22 kg; for a nuclear family of approximately five members, the staple food basket does not last longer than 15 days). Besides, a situation of dependency on the program has been created (“without the staple food basket people go hungry”), which often discourages the production of food. When the program is interrupted for some reason, there is chaos in the villages. This aid, therefore, does not contribute to the food security of the population. Furthermore, the program is very expensive for the government.

- **Water:** The water they drink and use for cooking is filtered river water. Generally the water is contaminated by pesticides, which often cause bowel and skin diseases. The excessive population also contaminates the water and leads to sanitary problems. Theoretically, each family should have potable water. In practice, however, there are many problems. The facilities do not last long and leave other families without water. The public policy managers are not able to adapt and negotiate taking into account the

cultural differences. This situation is reflected in the planning of the villages, in water supply and housing, and reproduces the problem; there is a huge investment, but also great inefficiency.

- **Monetary income:** People who can sell food in the cities do not make more than R\$ 30.00 (thirty reais) a month per family. Generally they use the money to buy salt, cooking oil, clothes, *erva mate* and meat.
- **Housing:** Housing in the camps is even worse: they live in plastic tents (this will be a great problem during the rainy season when the temperature drops to 5 degrees Celsius.)
- **Education:** In most camps the children do not attend school.
- **Safety and security:** The population of the Guarani Kaiowá villages is permanently subject to violence by gunmen employed by the neighbouring farm owners. They are physically attacked and threatened when they have to approach the farms to fetch firewood or to build houses. The safety of these villages is permanently threatened, especially since, in April 2006, two civilian policemen were murdered by indigenous people, because they entered the community of Passo Piraju without identifying themselves. This generated a growing atmosphere of hostility and discrimination against the Passo Piraju community.

The “staple food basket” program is insufficient and does not take the food culture of the Guarani Kaiowá people into account. They do not want to depend on paternalistic help from the government, but want to be able to produce their own food. They need support to recover their lands. In this sense it is crucial to implement the process of confirming the land ownership and to provide the conditions for them to produce food and have access to potable water, besides the availability of health care services, distribution of food compatible with the Guarani dietary culture, and a medium and long term program for the environmental recovery of the degraded lands.

The expansion of sugarcane production with 39 new companies foreseen to produce agrofuels may cause a great delay in the processes of recognizing and demarcating the indigenous lands and create greater hunger, especially among the Guarani Kaiowá population.

4.3. BIODIESEL PRODUCTION AT THE SANTA CLARA FARM, IN THE MUNICIPALITY OF CANTO DO BURITI, PIAUÍ

A Mission team visited the state of Piauí, in North-eastern Brazil, to analyze the impacts of biodiesel production in the framework of the National Biodiesel Program (see 3.3 above). The team visited Santa Clara Farm, a castor oil production project of the Brasil Ecodiesel company.

The state of Piauí presents some of the worst social indicators in Brazil. The state has one of the highest poverty rates in the country, immediately after Alagoas and Maranhão. According to the IPEA (2005), in 2004, 56.9% of the state population lived in a situation of poverty, i.e. 1.68 million people. Poverty affected 59.8% of the blacks in Piauí, and 47.8% of the whites and 73% of the rural population of Piauí were living in poverty. According to IBGE (2006) the state had the greatest inequality of income in the country: the 10% richest earned 30.6 times more than the 40% poorest (the national average is 15.8 times). The 10% richest earned R\$ 2,136.66; the 40% poorest had a mean monthly income of R\$ 69.87 (0.23 minimum wage, in 2005). The mean monthly income was R\$ 412.00 (2.90 per hour). Precisely 50% of the employed population worked in agriculture. This state also has the highest rate of informal labour, which reaches 80.4% of the working population. In 2005, 27.4% of the population was illiterate. Piauí is also one of the greatest exporters of labour, including slave labour, to the states of Pará, Mato Grosso do Sul and São Paulo. Many of these rural workers migrate to São Paulo to work in cane cutting during the harvest time.

In Piauí there are about 10 million hectares of lands that have been illegally occupied by squatters. The Gini index of land ownership concentration in the state was 0.751, in 2000 (MDA, 2001). At the borders with the states of Ceará, Pernambuco, Bahia and Tocantins are the large properties, where conflicts over land arise constantly. According to information from social movements, in Piauí there are between 150,000 and 200,000 landless families, i.e. families deprived of the conditions that would allow them to produce the basic foods needed to live without hunger.

According to reports from the national secretariat of the CPT (2008), in 2007, in the state of Piauí, 27 violent conflicts over land occupation and possession occurred, involving 2,310 families in a total area of 137,299 ha. In the same year, four cases of slave labour were reported, involving 241 workers; during inspections, 171 workers were released, who had been found in subhuman, overexploited working conditions. It should be mentioned that the state of Piauí, because of the poverty of its population, is one of the states from which the most slave labour comes for the farms in other states, such as Mato Grosso and Pará, the major part of them to work in agriculture.

The Santa Clara Farm Project of the Brasil Ecodiesel company

The castor production project at Fazenda Sta. Clara, owned by Brasil Ecodiesel, in Piauí, is in the municipality of Canto do Buriti, 330 km south of Teresina, the state capital. The land, approximately 39,000 hectares, was passed on to the company in 2004 by the state government, in a contract to use it for 10 years. The donation of the land by the Piauí Land Institute (ITERPI) is a subsidy, because the company does not pay rent.

The contract between the company and ITERPI includes the installation of a project for castor production by small family farmers, to be transformed into biodiesel by the company, with the social stamp of the federal government's PNPB, which provides tax subsidies to companies that purchase a certain percentage of the oleaginous raw material resulting from family farming⁶⁶. For this purpose, the company installed 20 *agrovilas* (agrovillages), with 35 houses each, and settled 700 families in 2005.

Among the settlers is a group that has its roots in a 1995 occupation on part of the old farm. Most of the 200 families that occupied the land, with assistance from the Movement of Landless Rural Workers (MST) and the State Federation of Agricultural Workers of Piauí (FETAG-PI), entered the company project. Most of the other members of the project were not farmers before but they lived in the neighbouring villages and small towns under predominantly precarious conditions. Currently about 610 families are settled, since some have abandoned the project.

The company built a service centre for the *agrovilas* where there are volunteer social services, such as a school for 800 children with 25 teachers, and a clinic providing free medical care. At the centre are also the technical services of the company (machinery, technicians), as well as the administration and delivery facilities. In the *agrovilas* each family has a house with piped water, toilets and electricity, which were given to them by the company. Each family also has a 5-hectare piece of land dedicated to castor production, 3 hectares for subsistence products and 0.8 ha of yard.

The castor is being processed in a biodiesel mill belonging to Brasil Ecodiesel at Floriano, which was inaugurated in August 2005, in the presence of President Lula and several government ministers. At that time, the Santa Clara Farm was characterized as a pilot project to involve family farming in biodiesel production, to create jobs and fight poverty in one of the poorest states in Brazil.

Despite the social character of the project, the Fact-finding Mission identified the following problems involving the production of raw materials for biodiesel and the labour and social conditions at the Santa Clara Farm:

Economic situation and income

The farmers on the Santa Clara Farm are submitted to a strict system of payments for the production of castor. The company contract with the producers establishes that the company is to hand over the plots – 5 ha of castor and 2 ha of beans – already prepared with a machine and sown to the farmers, whereas they have to hoe, harvest and deliver at least 3,000 kilograms of castor seeds per annual harvest. The price per kilogram of castor seed to be paid by the company was initially

66 In the Northeast and the Semi-Arid this percentage reaches 50%; in the Southeast and South, 30%; in the North and Mid-West, 10%. For further information see item 3.3 above or www.biodiesel.gov.br.

set at R\$ 0.50/kg and, at the last harvest, at R\$ 0.60/kg. Calculating for a target of 3,000 kg, the annual income for cultivating castor would reach R\$ 1,800.00. The producers are paid through a monthly advance of R\$ 150.00, which, when multiplied by 12 months, corresponds to R\$ 1,800.00 yearly. Yet, according to information from the farmers, no family is managing to achieve this goal, since the mean productivity from the 5 ha per family was between 800 and 1,000 kilos. This is due to a large extent to factors that are beyond the farmers' control, such as drought and lack of rainfall, as well as the fact that there was no adequate technical training, and the company did not prepare and deliver all the plots prepared with castor and beans within the appropriate period.

According to a 2006 inspection video made by the Public Prosecutor's Office and representatives from the workers unions and organizations of civil society, the company first promised the farmers annual net incomes of R\$ 12,000.00 to R\$ 13,000.00 for the sale of castor, counting on a mean productivity of 4,000 kg per harvest, reached in ideal systems by EMBRAPA. The company promised that each family would receive monthly at least one minimum wage, and another R\$ 10.00, which – at the beginning of the project, in 2004 – corresponded to R\$ 240.00 + R\$ 10.00 = R\$ 250.00 a month. However, when the company found that the farmers did not achieve the high target in the first six months, it compelled them to sign new contracts through which the salary was reduced to R\$ 150.00, and also pressured those who did not accept the new conditions to leave the project – these worse conditions were imposed although the Brazilian government soon raised the minimum wage to R\$ 350.00! The farmers interviewed – of whom most have a low level of schooling and some are illiterate, – state that they did not receive orientation when they signed the contracts and that they were not informed about the content of the clauses.

The company reduces the value of payments when the farmers do not reach the target of 3,000 kg/year established in the contract. Consequently, the families have their incomes reduced if the company, through visits by a technical inspector, finds that the low yield was caused by inadequate management of the crop. If a company cannot assign the responsibility for low yield to the farmers, they are obliged to hand over the lacking amount at the next harvest, in addition to the 3,000 kg of the new harvest, thus generating an accumulation of debt to the company.

Besides, the financial pressure exerted by the company to reach the targets has led several families to involve their children in the harvest, and that is why, in 2006, the NGO Funaguas reported it to the Public Prosecutor's Office because of child and slave labour. In a video from July 2006, several children aged 9 to 14 years confirmed that they help their parents with the crops. It should be mentioned that one of the conditions for the family to be able to enter the project was the presence of at least three adults per family. This means that the company

calculated that a lot of labour was needed for the crop without offering adequate payment.

Moreover, according to information from FETAG-PI, the company forces the farmers to make an additional 30% delivery of castor without payment. This unpaid delivery is not in the purchase contracts between the company and the farmers who were seen by the Mission. With this practice, the infrastructure offered by the company (housing, water, lighting, roads) is – at least in part – refinanced by the same farmers.

Land

The Mission found that there is great confusion regarding the future handover of the lands to the family farmers. The company points out, on its own webpage⁶⁷, that the land and infrastructure will become the property of the rural producers:

“As per the agricultural partnership contracts established, the property of the plots and real estate of the Santa Clara Nucleus will be transferred to our rural partners ten years after the first harvest, the contracts having been signed in 2003 and 2004.” Company representatives⁶⁸ confirmed to the Mission that each family will receive 8.9 ha (8 ha of land for cultivation and 0.9 ha of yard for the house and kitchen garden), besides the 10 ha of agricultural land that are further away from the family lot, everything with a definitive title after the project has been ongoing for 10 years. However, during the interviews carried out by the Mission, the same farmers found that they only know about the handover of 3 ha after the 10 years, in 2014. Obviously they could not present any legal document that guarantees the future handover of the land. In an interview, on the occasion of an inspection visit on July 26, 2006, a few of the settlers expressed fear because they feel insecure about possibly losing the land, since – because of the economic pressure exerted by the company – some would not even be able to stand it and stay there until the 10 years are up.

The Land Institute of Piauí (ITERPI), the state entity that manages the state land, found in an interview that there is only a 10-year contract for use with the Brasil Ecodiesel company⁶⁹. After 10 years the land goes back to the state government. As far as the interviewed ITERPI people know, the contract between the company and ITERPI does not provide for any land transfer to the farmers. Even worse, the sale of State land would only be possible with permission from the State House of Representatives of Piauí. ITERPI representatives mentioned the possible option that the settlers could buy the land after the 10 years through the Land Credit program, the mechanism which provides access to the land through the market (see 3.4.1). This means that they would become further indebted.

67 See at <http://www.brasilecodiesel.com.br/> visited at 04/15/2008

68 Brigida Lima, agronomist; Hugo Alexandre, administrative supervisor at Brasil Ecodiesel.

69 Interview of the Mission with Regina Lourdes, Land Ownership Coordinator, and Tadeo Maia, Head of the Prosecutor's Office, Piauí Land Institute (ITERPI), Teresina, 4.8.2008.

The Ministry of Agrarian Development (MDA), for its part, confirmed that there is an agreement between them and the company to transfer the land to the settlers⁷⁰. However, it was not possible to gain access to the contracts before this report was concluded. Based on accessible information, the Mission finds that there is no guarantee that the settlers will receive any land after 10 years.

There are also doubts regarding the sustainability of land use by Brasil Ecodiesel in the part of the farm that is not occupied by the castor cultivation. Of the total surface of the farm, 39,000 ha, the castor project currently takes up at most 7,000 ha (8.9 ha per maximum capacity of 700 families, besides the community areas in the centre of the "agro-villages". This means that almost half the farm can be used for other purposes. About 35% of the farm is to remain a legal reserve (transition eco-zone between *Cerrado* and *Caatinga*). However, according to information from representatives of different social organizations who were interviewed, all the rest has already been practically clear cut (deforested) to produce charcoal. Until – at least – 2006, there were five industrial furnaces for coal production at the farm, using modern technology and controlled by computers. After this was reported to the respective state agencies by the NGO Funaguas, the company stopped doing this at the Santa Clara Farm and transported the wood taken from native forests to the neighbouring farm, Canto do Buriti, where they are now producing charcoal. Surprisingly, the Ibama superintendent in Piauí, Romildo Mafra, said that despite the existence of the furnaces and the documented occurrences, the Santa Clara Farm cannot produce charcoal because they do not have the Document of Forest Origin (DOF) (Martins, 2008).

Organization and participation

There is controversial information about the labour rights of the farmers, their power of negotiation and their possibility of organizing in unions. Representatives of the company allege that they have a good relationship with the local and state union. However, the workers report that the company is intimidating them in their efforts at organizing. FETAG reported that in 2006 and 2007 it paid more than 50 visits to the farm to organize the settlers in associations, but that the rural workers are afraid to organize. This is due to the intimidation the farmers suffered after a demonstration of about 800 workers in June 2006. The company punished the demonstrators, whom it had identified through films, and stopped paying their advance and delivering their staple food basket, and even threatened the demonstrators with the abandonment of the project. In the inspection video of July 2007, a few settlers expressed concern about the presence of armed guards who watched the school at the centre of the settlement, a measure which intimidated – at least – the children.

⁷⁰ Mission interview with Arnaldo Anacleto de Campos, Director of Income Generation and Value Addition, Federal Ministry of Agrarian Development (MDA), Brasília, 4.9.2008.

The Mission found that, in the negotiation of prices, there was lack of real participation by the family farmers. The economically insufficient price was negotiated without the participation of the local union. The Biodiesel Program conditions the delivery of the Social Seal on the participation of representatives of the farmers in the negotiation of the contracts⁷¹. According to information obtained from the unions, the contracts were negotiated between the company, the Ministry of Agrarian Development (MDA), the National Confederation of Workers in Agriculture (CONTAG) and the State Federation of Workers in Agriculture of Piauí (FETAG-PI), in Brasília. However, due to the difficulty mentioned above regarding the right to organize within Santa Clara Farm, there is practically no relationship and communication between unions at state and federal level on the one hand and settlers on the other.

The settlers do not have any other choice but to accept the prices that are negotiated at a federal level and the conditions imposed by the company. They depend completely on the company: Brasil Ecodiesel supplies them with a house, water, electricity, education and health care services, prepares the castor and bean crops, supplies the seeds, the agricultural inputs and technical support. At the end, it receives the harvest and pays. Company technicians control the crops to check their appropriate management by the farmers. Additionally, the settled families receive a "staple food basket" from the company, a measure of dietary help which intends to increase the level of food security among the settled families. According to information received from different interviewees, the company makes use of this dependence to impose its own interests.

Because of the dependence mentioned, the relationship between the settlers and the company is much more characteristic of a labour relationship based on wages, than a relationship between a company and independent producers. According to FETAG, the company refused to respond to their demands, arguing that it only has use contracts with independent farmers, not with wage workers. However, the only characteristic of an independent farmer among the Santa Clara farmers is the risk of losing their harvest and thus their income.

⁷¹ National Program of Biodiesel: On contracts with family farming Art. 6 To obtain the concession to use the social fuel stamp, the biodiesel producer must previously establish contracts with all the family farmers or their farming and livestock cooperatives from whom it purchases raw materials.

§ 1 The contractual negotiations shall have the participation of at least one representative of the family farmers, which can be done by:

I. Unions of Rural Workers or Workers in Family Farming, or of Federations affiliated to the National Confederation of Workers in Agriculture – CONTAG;
II. Unions of Rural Workers, or of Workers in Family Farming, or Federations affiliated to the Federation of Workers in Family Farming – FETRAF;
III. Unions of Rural Workers or of Family Farmers linked to the National Association of Small Farmers – ANPA; and
IV. other institutions accredited by the MDA.

§ 2 The contracts celebrated between the parties must contain at least:

I. the contractual period;
II. the purchase value of the raw materials;
III. the criteria of readjustment of the contracted price;
IV. the conditions of delivery of raw materials;
V. the safeguards included for each party; and
VI. identification and agreement with the contractual terms of the representatives of the family farmers who participated in the commercial negotiations.

5. Conclusions

Considering the reports gathered, which were compared and corroborated with a number of studies from different sources and in interviews with scholars and specialists in this subject, as well as with the official authorities, the Mission concludes that there is occurrence of systematic, multiple violations of human rights of the sugar cane workers, indigenous peoples and peasants. These violations are directly or indirectly linked to public policies promoting the production of agrofuels in Brazil. Below we will analyze the main violations found based on the standards of international human rights law.

5.1. HUMAN RIGHTS VIOLATIONS IN SUGARCANE PLANTATIONS FOR ETHANOL PRODUCTION

The human right to work with impacts on the right to food, housing and health

The working conditions that the sugarcane cutters reported to the Mission are degrading and dehumanizing, and, therefore, are not compatible with human dignity. Under the current conditions and considering the significant number of workers who died of exhaustion, it is clear that the work in sugarcane cutting is an attack against the physical integrity of the workers and, for this reason, cannot be considered decent work. The Mission stresses that it is not referring to cases of slave work and forced labour which also occur in this industry (see above in 3.2; CPT, 2008), but to the general conditions of the sugarcane cutters. As shown by the investigations and reports that have been produced since 2005 by the National Rapporteur on the Human Rights to Work of the Brazilian ESCE-Rights Platform, as well as the studies by FUNDACENTRO, the Institute of Scientific and Technological Research related to the safety and health of workers of the Ministry of Labour and Employment (1997) and the studies by professors Francisco José da Costa Alves, Pedro Ramos, Maria Aparecida de Moraes Silva, the testimonies collected by the Mission are not isolated cases. Rather, these testimonies reflect a common situation in the industry that even occurs in the state of São Paulo, the state with the highest degree of formal labour relations in the country. As was shown, this situation also affects indigenous rural workers in, amongst others, the state of Mato Grosso do Sul. The Brazilian State is not complying with its *obligation to protect* the sugarcane workers from non decent working conditions imposed by the companies in the sugar and alcohol industry. The Brazilian State also had broad knowledge of the working conditions in the sugar and alcohol industry when it decided to adopt policies to expand the production in this sector and did not take the necessary measures to deal with this situation or to prevent a worsening of the exploitation of workers due to current expansion movement. We also found that the labour problems that exist in this sector do not result from the lack of labour laws; Brazil in fact has incorporated several ILO guidelines to its labour

laws. The problem is rather implementation of labour laws due to, i.e. the limitations of the Brazilian State in enforcing them, considering the size of the problem and the Brazilian agrarian model itself. By not effectively protecting sugar cane cutters from over-exploitation, the Brazilian State violates by omission several international human rights treaties protecting the right to work, as well as of current national labour legislation. The non-compliance with this obligation occurs at several levels, as we will show below.

The inspections of the conditions of lodging and food of the sugarcane workers are still insufficient

As we described above, the sugarcane cutters are submitted to very bad conditions of lodging and food. Applying an approach of interdependence and indivisibility of human rights, the Mission stresses that these living conditions seriously affect the sugarcane workers' rights to adequate food and housing. Even though the wages received by sugarcane cutters on average are above the minimum wage in Brazil, it should be taken into account that these earnings do not automatically ensure that the workers have access to adequate food and housing. As we described above, the degrading conditions of housing, the isolation from the families and communities of the migrant workers, and the excessively long work day are all factors that prevent the worker from feeding themselves adequately. FUNDACENTRO calls attention to the fact that hunger affects the day workers (*bóias frias*) twice as much than the landless people, and that a study even established that the time of the day when there is the highest rate of accidents among the sugar cutters is between 8 and 11 am, because the workers begin to work without having had a good meal (Gonzaga et al, 1997; Gonzaga, 2008). On the other hand, in cases in which the mills provide food, this food is mostly low quality and irregularly provided.

The Mission found that the Public Prosecutor's Office and the Department for Labour Inspection have been making great efforts to improve enforcement of labour laws and achieved important advances, such as, at least in the state of São Paulo, eradication of child labour and the vetoing of the transportation of workers in trucks. However, according to people interviewed by the Mission, there is still insufficient enforcement. In this context, it is worrisome to hear that the Department for Labour Inspection may lose 20% of its budget for the current year (Adoue, 2008).

Prevalence of unhealthy working conditions

The reports collected by the Mission showed that the current working conditions of the sugarcane cutters compromise the physical integrity of the workers, cause serious occupational diseases and, in other cases, actually lead to the death of workers. According to FUNDACENTRO (Gonzaga, 2008), the main factors that affect the health of the workers are the following:

- Chemical: workers are exposed to pesticides, herbicides and maturing agents applied to sugar cane. In Nicaragua there is evidence that 1,383 workers died due to chronic renal failure caused by maturing agents.
- Physical: excess heat, heat stress, humidity, solar radiation.
- Mechanical: friction, pressure, vibration, inadequate personal protection equipment which hurts or injures the workers.
- Biological: bacteria, fungi and viruses, poisonous animals.
- Organizational: form of payment per production which induces the cutters to work to excess, individual and collective production goals connected to forms of payment, causing conflicts among the workers. The human resources professionals at the mills are concerned with demanding higher production from the workers, with punishments (fines, suspensions and threats of being fired) and awards (from weekly staple food baskets to annual television sets and sound equipment). Long workdays, lack of breaks. Rigid production standards defined by ISO 9002 procedures – rigid operational routines that do not take real work into account, get in the way of carrying out work and condition postures that could generate health problems, for instance: cutting flush with the ground, organization of the sugarcane cut in the 3rd street, etc.
- Operational: posture, strength, repetitive movement (approx. one machete stroke per second).

Violations of human rights related to work

The National Rapporteur on the Human Right to Work (Costa & Neves, 2005), on an investigative mission to the sugarcane plantations in the Ribeirão Preto region, in 2005, concluded that the set of conditions to which the workers are submitted (overexploitation of the workers, deficient inspection of the labour relations and anti-union practices) has led to mutilation and deaths of workers in the sugarcane plantations. The National Rapporteur at that time pointed out that the form of remuneration used by the sugar and alcohol industry violates art. 7 of the ICESCR, the excessively long workday infringes the dispositions of the labour legislation, identified many situations that violated the NR 31 (see chapter 2.1.2.2) and concluded that “the increasing precarious labour relationships violate every legal principle referring to labour, condemning the workers to submission to conditions that are not favourable to them. (...) The way labour is used by the monoculture companies in the interior of São Paulo subjects workers to alienation through work, dependence and exploitation, converting what would be a human right, legally binding for the State, into a painful effort, imprisoning human beings.” The CPT (2008) too, on analyzing the information on the cases of overexploitation and violation of labour rights in 2007,

which occurred especially as related to the sugarcane plantations in São Paulo and in Mato Grosso, concludes that “violating the Labour Laws, especially NR 31, represents a regression of human rights, which concern the moral constitution of individuals, the reduction of their bodies to labour, and also the denial of the social being endowed with the universal principle of freedom and dignity.” The National Rapporteur also pointed to the “deficiency in intermediation and inspection of labour relationships”, expressed in the permanence of unhealthy and dangerous working conditions, and in violation to the national legislation and to international treaties on human rights. Isidoro Revers, coordinator of the CPT in the project on Hydro and Agribusiness, points out: “In Brazil there is appropriate legislation to regulate labour relationships and environmental protection. However, not even the government agencies can monitor the whole sector, since there are massive violations of the laws.”

State omission to guarantee adequate social care of sugar cane workers

According to a study by FUNDACENTRO in 1997, the “Occupational Accident Report” (CAT) does not supply enough information to allow full understanding of the causal relationship of accidents and occupational diseases, as well as the situation of the injuries resulting from these pathologies (...). The problem of labour accidents that are not registered was detected in the preliminary report of the Foundation State System of Data Analysis (SEADE) about living conditions in the metropolitan region of São Paulo, demonstrating that out of the people who mentioned having had an accident at work, 75.2% were not notified, i.e. the CAT was not completed. We can consider the present study, therefore, as the tip of the iceberg regarding accidents in the Region of Catanduva, considering the under-notification of cases and lack of registration in the work card, or else, according to Damásio, the CAT is only the tip of the iceberg of the accident issue, since notification of work accidents using the CAT is only mandatory for employees who work according to the Labour Law (CLT)” (Gonzaga et al., 1997, p. 42, 46, 47). During the interview of the Mission delegates with FUNDACENTRO researchers, we heard that these insufficiencies have not been corrected.

Without the issuance of the CAT, the worker receives medical care for an ordinary disease (B31) and can be fired as soon as he/she is discharged by the medical service without any guarantee of receiving the Severance Fund. Professor Francisco José da Costa Alves, in an interview with the Mission, stated that the sugar and alcohol industry has the greatest number of workers on “sick leave” in the social security system, thus externalizing these costs to society. In fact, after the Institute of Sugar and Alcohol (IAA), the public agency that regulated the sugar and alcohol industry, was closed at the beginning of the 1990s, the mills stopped investing in social services for the workers. As mentioned above,

recently the Federal Court of Araraquara, in a sentence of February 29, 2008, ordered eight mills to comply with the Social Assistance Plan (PAS) as set forth in Law 4,870/65, establishing that "(...) having weighted the constitutional principles that are apparently in conflict, my opinion is that the guarantee of social rights and social assistance to whoever needs it must be above the so-called economic freedom of mill owners and alcohol producers." Thus, the sentence orders the Federal Union to promote the true enforcement of the application of the PAS resources by the co-defendant companies, and it also orders them to work on preparing the PAS for the present and future harvests in the sugar and alcohol industry, presenting it to the Ministry of Agriculture, as well as to the Department for Labour Inspection (SIT). In the same sense, the defendant mills are to apply the funds to the PAS in pharmaceutical and dental care, social care, specific recreational and educational care using specifically the resources of the aforementioned PAS and an exclusive bank account for this purpose, all according to the law.

Outsourcing, increasing precarious conditions and vulnerability of sugarcane workers

Considering this situation, it is worrisome that the federal government, on December 29, 2007, published Provisory Measure # 410, approved by the Federal House of Representatives on April 10, 2008, and now to be considered in the Federal Senate. This Provisory Measure (MP) does away with the requirement to register employment on the work card, in order to employ rural workers for jobs up to two months in a period of one year (workers paid by harvest). For unions such as FERAESP, this measure will make working conditions even more precarious insofar as it does away with the need to sign the work card for rural wage-earners employed for up to two months. As a consequence, millions of seasonal workers will not have the right to register their work on the card and will not receive the benefits or social security resulting from the work contract. According to the Bar Association (OAB), this Provisory Measure establishes a discrimination against the rural workers compared to the urban ones (thus infringing the constitutional principle of isonomy), creates difficulties for inspections by the Ministry of Labour and favours informality in labour relations in the rural areas.

We found that current legislation about the impossibility of outsourcing sugarcane cutters by means of *gatos* (recruiters) is not being complied with, and omission of the State in ensuring access to jobs by establishing information networks concerning the labour market on the local, regional and national levels. The spurious and illegal practice of intermediating or outsourcing the contracting of workers increases their vulnerability, especially the migrants, although many of them consider using intermediaries to be the only way of obtaining work in the sugarcane industry. In this context it should be pointed out that according to GC 18 of CDESCR, paragraph 12, on the Right to Work as enshrined in the ICESCR, the State is obliged to ensure access to the

labour market by establishing information networks concerning the labour market on the local, regional and national levels which allow the rural workers to have greater freedom to choose the best working conditions.

The cases of intimidation and persecution of the union leaders reported to the Mission are threats to practicing union freedoms and are a reason for concern.

Slave labour and child labour in the sugar and alcohol industry

The Mission received information about cases of slave labour occurring in the sugar and alcohol industry. In 2007 this industry stood for the greatest number of workers released from slave labour situations by the teams of the Ministry of Labour. According to the Ministry, this is the result of the intensification of inspections in this sector, which we consider an appropriate measure by the Brazilian State in accordance with the commitments undertaken in the human rights treaties. However, because of the seriousness and recurrence of the problem in the country, inspection and punishment of the companies infringing labour laws must be further intensified.

Besides, the governmental policies to tackle this situation more broadly and in greater depth, especially policies to support peasant agriculture, agrarian reform, employment and income generation in the regions of origin of migrant workers, are still insufficient. Most slave labourers are migrant workers, men, illiterate, unemployed, without land or with little land, but without resources to cultivate it; they come mostly from the poorest states of Brazil (Maranhão, Piauí, Tocantins) and, pressured by the lack of jobs and of land, subject themselves to conditions of overexploitation or slavery when promised some work⁷².

Lack of effective inspection in dealing with violations to environmental and health rights caused by sugar cane monocultures

The Mission was also able to corroborate reports on the harmful environmental effects of extensive sugarcane monoculture received from several sources (see Hirsch et al, 2002; Guarneri & Jannuzzi, 1992). Outstanding among these effects are the loss of biodiversity due to the use of agricultural chemicals, the possible contamination of the Guarani Aquifer, the intensive use of water to irrigate sugarcane, spilling vinasse on the crops for fertigation effects, contaminating the soils and groundwater, burning sugarcane which pollutes the air and affects the airways of thousands of people and non-compliance with environmental laws.

Due to social pressure against burning and the modernization process of that industry, the mechanization of the harvest of raw cane was intensified. For the

⁷² For further details concerning the characteristics of the slave labourers, see Sydow (2003, pp. 109-114).

machine to work well, the land has to be flat, without holes, stones and stumps. In 1998, the former governor of Sao Paulo, Mario Covas, agreed with the mill owners in the "Bandeirantes Agreement" to end the burning in 2006. The State House of Representatives voted the agreement into law. However, in a gentleman's agreement of the current state government, the end of burning has been postponed to 2018. The prospects of mechanization make the workers fear for their jobs. Currently, the cost of the labour force is so low that the industry does not have much incentive to mechanize. Despite this, the Brazilian State is obliged to consider job creation policies in case the cane cutters lose their jobs.

Lack of effective protection of the indigenous peoples and demarcation of lands

The pressure exerted by the expansion of sugarcane crops in Mato Grosso do Sul has postponed the demarcation of indigenous lands in that state, further worsening the situation of violations of the right to land and food to which the indigenous people are submitted, especially the Guarani Kaiowá people. We find that the Brazilian State has failed in its obligations to protect and fulfil the rights of the Guarani Kaiowá indigenous people, disobeying the guidelines of ILO Convention 169, of the ICESCR and of the Declaration on the Rights of Indigenous Peoples. We found that the lack of effective and prompt steps in seeking definitive solutions and insufficient emergency measures make the already precarious situation of these peoples even worse, undermining their way of life and exposing them to systematic violence at several levels. In 2007, according to the CIMI report, there was a 99% increase in the number of murders of indigenous people in the State of Mato Grosso do Sul, the region where the sugarcane crops are expanding; they went from 27 in 2006 to 53 in 2007. According to anthropologist Lucia Rangel, the report editor, "the data shows that a real genocide is still ongoing in Mato Grosso do Sul: a greater number of victims of murder, attempted murders, suicides; still high levels of malnutrition, child mortality, alcoholism and all kinds of aggressions and threats. They die from being run over, they beg in the towns, they suffer sexual violence, they are arrested and live amidst large plantations (sugarcane, soybean, corn) and extensive livestock raising which contaminate the water sources with pesticides, cause diseases and does not leave space for indigenous family farming." Because of the small areas of land in which they live, the indigenous people are obliged to work at sugarcane mills, under degrading conditions and as slave labour. The Mission also found that the state government does not comply with its obligation to fulfil the right to adequate food of the Guarani Kaiowá people; the federal government does not supply sufficient staple food baskets, and in addition they are not adequate to the indigenous food culture. Besides, the authorities have not acted to protect the indigenous territories against predatory actions on the natural resources nor implemented policies to recover the natural resources of these areas. The disordered

and uncontrolled proliferation of mills in Mato Grosso do Sul, many of them belonging to foreign capital, requires immediate and definitive responses from the Brazilian State to protect and guarantee the rights of the indigenous peoples.

Insufficient protection of the right to food and the environment for the traditional populations of the Cerrado and Amazon

The Mission also received studies and heard reports concerning the impacts of the expansion of sugarcane (and soybean) crops in the regions of the *Cerrado* and the Amazon, and also of the displacements of cattle raising and soybean production to the Amazon, because of the advance of sugar cane in the Mid-South of the country (see 3.2). These studies point out serious threats to the rights of the traditional communities to the environment and consequently to the right to food due to sugar cane and soya expansion and displacement of cattle raising. The studies highlight gaps and distortions in governmental actions in terms of protecting the rights of the traditional populations of these regions. As enshrined in article 11 of ICESCR, the State is obliged to protect the access of the communities to land and natural resources against destruction caused by third parties. The data from the CPT have shown an alarming increase in private violence against the rural communities, in the form of eviction from the land and murders, precisely in the regions where the agricultural frontier is expanding. 41% of the cases of violence in the countryside in 2007 affected the traditional populations that live mainly in the Amazon region. According to CPT, the process of displacement of soybeans and cattle to the Amazon has two "main consequences: increased devastation of the Amazon forest and losses to traditional peoples, such as the indigenous, riparian and former black slave peoples, and fishermen who have lived for centuries in the region and are losing their lands" (Platonow, 2007). In other words, the State is failing in its obligation to protect traditional populations and their access to the land and natural resources. Additionally, the destruction of the environment and of biodiversity by deforesting the Amazon region is still going on and has been intensified since the middle of 2007, despite the measures adopted by the government to inhibit it. Finally, the disordered expansion of sugarcane and soybeans in the *Cerrado*, and the omission of the government to regulate it, is a serious risk to this important biome and its biodiversity. This situation is worsened by the lack of a surveillance system, such as the one that exists for the Amazon. But this is not all. We know that the *Cerrado*, like the Amazon, is not an empty, uninhabited area, available for the expansion of agro-energy crops, as is suggested by government documents on agro-energy. The fact that the *Cerrado* populations are not being considered and the disordered and uncontrolled occupation by monocultures and cattle farms are a serious threat to the rights of peasants and traditional communities of this region.

Lack of regulation in the sugar-alcohol industry

Although the inspection and strict application of labour and environmental laws are important to overcome the situation of massive and systematic violations of human rights of broad sectors of the population that are affected by the sugar cane monoculture, profound changes in the form of production of this industry are required to effectively guarantee the workers' rights to decent work, and also their rights to food, housing and environment. As professors Pedro Ramos and Francisco José da Costa Alves told the Mission, the industry was widely deregulated. While the representatives of the sugar and alcohol industry have a broad representation of their interests in different State agencies (Ministry of Development, Sectorial Chamber, Ministry of Agriculture, National Oil Council), since the IAA disappeared, there is no longer an inspection and enforcement agency to take care of the industry. The supposed economic efficiency and high competitiveness of Brazilian alcohol are actually based on the overexploitation of the workers thanks to the system of payment according to production⁷³, the tax advantages, the huge debts accumulated towards social security, and the externalization of the social and environmental costs incurred by the sugar and alcohol production. On the other hand, there are no rules that prevent the vertical integration of the industry, as occurs in Australia and in the USA, where mill owners are forbidden to simultaneously own sugarcane plantations. In São Paulo, around 75% of the grinded sugar cane per year was supplied by plantations owned by the mill owners themselves (Ramos, 2007). This indicates that the power of negotiation of the sugar cane suppliers is small, and monopolistic structures have been created with a tendency towards an oligopoly that concentrates the income in the hands of a few. Likewise, the Mission was able to find, through an interview with the Land Institute of the State of São Paulo (ITESP), that the state does not have use plans for agricultural lands, so that what prevails in the state is the freedom to sow what one wants, where one wants. However, the 1988 Constitution allows the drawing up of a zoning plan for rural land at the municipal level, but so far it has practically not been applied⁷⁴. Furthermore, the law does not limit territorial expansion or land concentration. For the reasons presented here, it should be concluded that the Brazilian State is failing to fulfil its duty to

73 In 20 years, the productivity of cane cutters doubled from 6 to 12 tons a day, without any technological innovations or machinery, while their payment (basic wage) went down from 2.5 to 1.2 minimum wage (See Ramos, 2007 and Alves, 2008).

74 According to information given to the Mission by Sérgio Schlesinger, due to the lack of any land use planning or study of impacts by the federal government, a few municipalities located in the sugar cane expansion areas have been adopting their own laws to regulate and restrict the negative impacts of this expansion. The Rio Verde municipality in the state of Goiás, determined that only ten per cent of its agricultural area can be occupied by sugar cane. The concern is to keep already existing crops, such as corn, cotton and soybean in the municipality, the feed of which keeps the industrial complex of the Perdigão company busy, generating more jobs and taxes in the region. In Sacramento, in the Triângulo Mineiro area, a law enacted in 2006 by the Town Council limits the area planted with sugarcane to 20% of the overall surface of the municipality. It also establishes a minimum distance from the water sources (springs), licensing standards, besides forbidding burning less than ten kilometres from the town and less than five kilometres from the villages, among other provisions. The states of Goiás and Paraná also intend to increase controls on the expansion of sugar cane. In the case of Paraná, the government announced that it will create an agricultural zone for sugarcane to prevent its expansion to areas of other crops and forests.

protect the social and environmental human rights of the sugarcane workers by not establishing a full and effective regulation of the industry.

Displacement of food crops

For the Mission, the indirect effects of the expansion of sugarcane crops are a reason for concern. According to the reports collected by the Mission, the expansion of the area planted with sugarcane in São Paulo, where the crop already occupies 3.4 million hectares, pressures other crops and pasture areas to new frontiers. The people interviewed by the Mission expressed concern about the loss of food autonomy by the state of São Paulo, above all beans, corn, milk and meat. In Araraquara, planting grain and raising cattle are being replaced by sugarcane, making the price of land increase by 70% in only 12 months. The space occupied by sugarcane in the Araraquara region doubled between 2001 and 2007, reaching around 480,000 hectares, including new areas and areas that are being used for production (Carvalho, 2007). The preferential regions are the Triângulo Mineiro region, the south of Goiás and the east of Mato Grosso do Sul. Other areas of great expansion besides these are Paraná, Tocantins, Maranhão, Mato Grosso, Piauí, Pará and Bahia, as we described above (see 3.2).

The displacement of peasant family agriculture and the depopulating of rural areas in municipalities such as Ribeirão Preto are also worrisome. Considering that small scale peasant family farming is the main food producer in Brazil, the slow disappearance of this sector in the state is a reason of concern.

Increased food prices – greater impact on the poor

The impact of this process on the general population, especially the poorer people, was felt already in 2007, when the Foundation Institute of Economic Research (FIPE) recorded historical highs in the prices of food in São Paulo, including beans (149.50%), powdered milk (43.77%), potatoes (40.30%), beef (18.88%), etc. The prices of foods recorded a rise of 12.73% in that year, almost three times more than the general inflation rate (Oliveira, 2008). These increases affect the poorer families in particular. According to a survey by DIEESE in 2007, the cost of living in the municipality of São Paulo rose by 4.8% (pulled by the rise in the prices of foods that reached 12.48%), and this rise was more marked for the poorer families (mean income of R\$ 277.00) that had a 5.55% rate (Oliveira, 2008). Specialists and the Ministry of Agriculture itself admit that the growing worldwide demand for the production of agrofuels is the main reason for the increased price of foods (Gomes, 2008, p. 4). We fear that this situation, insofar as it penalizes precisely the poorest, could undermine achievements that occurred in the field of ensuring the right to food and poverty reduction through the recovery of the value of the minimum wage, job creation and social security and social programs.

5.2. VIOLATIONS OF THE RIGHT TO FOOD IN THE SCOPE OF THE BIODIESEL PROGRAM

Food vulnerability

The Mission found that the revenues per family at the Santa Clara Farm, belonging to Brasil Ecodiesel – which is part of the National Biodiesel Program of Brazil – are not sufficient to cover the basic needs of the peasant families that are part of the project. The comparison of the total payments established in the contract between the farmers and the company (2007 contract) of R\$ 150.00 a month (R\$ 1,800.00 a year) with the minimum monthly wage of R\$ 415.00 shows that these revenues should be considered very low, even taking into account the production of beans for personal consumption and the delivery of the staple food basket to complement the diet. Considering, furthermore, that the low yield of castor crops in the project and, consequently, the reduction of payments to the farmers induce them to go into debt, this practice results in high food vulnerability among the settled families. The project contract provides for the presence of, at least, three adults per family as an active labour force in the project and, thus, practically prevents them from seeking other sources of income outside the Santa Clara Farm. Therefore, because of this situation of vulnerability and dependence, any reduction in payments or delivery of the staple food basket has a direct negative impact on the quantity and quality of food and can, therefore, be considered a threat to the settlers' right to food.

Insecurity of land tenure

Based on the information obtained, the Mission concludes that the settlers currently do not have any guarantee in hand that the land will become their property or that they will have permanent and secure access to this land after 10 years of existence of the contract between Brasil Ecodiesel and the State of Piauí. None of the parties involved were able to show the Mission that there are clear agreements, written in contracts, about the amount of land and in what form it will be transferred. When the project ends, this insecurity about possession and ownership of the land, and the risk of losing all or part of the land, or having to buy it, will become a threat to the settlers' capacity to feed themselves sufficiently and adequately.

Intimidations to free association and organization

Based on the testimonies received, the Mission concluded that Brasil Ecodiesel prevents free association and organization of the settlers through intimidation and sanctions against individuals. The lack of protection of the workers by the State against the company's practice of cancelling monthly payments and delivery of staple food baskets due to their efforts to unionize, is not only a violation of the right to free association, but also impacts on the right to food of the affected families. The lack of organization among the settlers results in

weaknesses in the negotiation of the sale price of castor. This reduces the possibility of achieving the best prices for the product and prevents the producers from seeking alternative markets.

Contradictions between the National Biodiesel Program of the Brazilian government and food security

Dependence of integrated small farmers

The model of integrated production in which the family farmers are attached to the producing companies has been questioned: "Experiences such as small farmers planting castor in the Northeast demonstrated the risk of depending on large agricultural companies which control the prices, the processing and distribution of the production. The peasants are being used to give legitimacy to the agribusiness, by distributing certificates of 'social fuel'" (Pinto et al., 2007). The model of integration of the family farmers into the large company generates dependence, indebtedness and decapitalization. Furthermore, the small farmer generally receives an infinitesimal income from the whole production chain of biodiesel. Those who really profit are the large crushers (companies that extract the oil sold to the processing mills). In this model, controlled by the large companies, pressure on the small farmers eventually makes it hard for them to remain in business, and consequently leads to the sale of and concentration of lands. Thus, this program, as is the case for *Proálcool* (see 3.2) instead of creating jobs, creates day labourers. An alternative would be to stimulate the creation of mini-mills to process biodiesel controlled by the small producers (Campos, 2006).

A fundamental weakness of the Brazilian government's PNPB relates to the behaviour of prices in the market for vegetal oil. Despite the increase of prices paid to the castor farmers within the scope of the PNPB (from R\$ 0.50 to R\$ 0.75/kg in 2008), there continues to be a great gap compared to the price the farmers could get if they could sell the product to other buyers. There is a demand for vegetal oil from castor on the international market, mainly from the chemical and pharmaceutical industry. According to information from MDA, the farmers could obtain prices above R\$ 1.00/kg if they sold the product freely. As could be seen in the case of the Santa Clara Farm, the program may create dependence among the farmers, leaving them tied to a much lower price than the price they could obtain from other purchasers. The Biodiesel Program cannot survive under these circumstances without government subsidies. Consequently, the PNPB can be qualified as a social care program that does not necessarily contribute towards creating independent producers and to their economic development within the program. Over the medium and long term this dependence increases the food vulnerability of the farmers, which may become even worse when the program ends or if for some reason the companies that produce biodiesel – such as Brasil Ecodiesel – withdraw.

Lack of complementarity with subsistence production and increases in the price of soy oil

An important aspect of the Biodiesel Program is the complementarity of the revenues from the castor crops with production for subsistence. Thus, the production of raw material for vegetal oil should not impair the production of food for personal consumption. However, the government is interested in increasing production to meet the fuel mixing goals and, because it assumes that a larger offer will reduce the price of vegetal oil on the market, increasing the profitability of the Biodiesel Program. For farmers, this interest leads to pressure to increase the amount of raw material crops for vegetal oil. As can be seen in the case of the Santa Clara Farm, this dynamic provokes a contradiction between crops for agrofuel production and subsistence crops. The farmers at the Santa Clara Farm have expressed their interest in increasing production of crops such as rice and cassava for their own consumption. However, due to the quantity of castor they must produce, they lack the working capacity to dedicate more time to subsistence crops. In this way, they produce less food and, at the same time, by producing castor they do not achieve prices that would allow them to cover their food needs. In this situation, independent farmers would try to sell their production under more favourable conditions, leave it or reduce it if this were not possible, and increase food production. This decision, however, cannot be taken by the Santa Clara Farm settlers, thus increasing their dietary vulnerability.

Finally, it should be highlighted that the assumption of the Brazilian government that larger market offer of vegetal oil will reduce prices has not been confirmed. On the contrary, it appears more logical that the growing demand for vegetal oil provoked by the Biodiesel Program contributes to the rise in market prices – also of vegetal oils used to produce foods. In this way, the Biodiesel Program is one more factor in the global dynamics of high food prices. The MDA minister, Guilherme Cassel does not see a risk of competition between the production of biodiesel and food production. In his opinion, “planting oilseed plants to produce biofuels will in no way replace the production of foods in family agriculture”, it is rather “a possibility of adding income” (MDA, 2007).

Studies have already proved how public policies favourable to agribusiness drove the production of soy, while they provoked the stagnation or reduction of the production of basic foods for human consumption, generating food insecurity and violating the human right to adequate food (Bickel, 2004; see also 3.3 above).

Although Brazil is a great soybean exporter, the major increase in the use of *soybean oil* to produce biodiesel, besides affecting the price, making it more difficult for the more vulnerable population groups to have access to it, may also be a risk to the supply on the domestic market of Brazil. According to ABIOVE (2008), in the 2007/08 harvest Brazil produced 5.3 million tons of soy oil, 2.1 millions of tons for export and 3.2 for domestic

consumption. The price of soybean oil has gone up very fast on the international market: in 2001, it was US\$ 306.00/ton; in March 2008 it had already reached US\$ 1,343.00 (Chicago Exchange). With the price increase on the international market and its growing use for biodiesel production, the price of soybean oil also went up steeply on the domestic market. According to FIPE, in the last 12 months the price of soy oil went up by 56% for Brazilian consumers.

In this sense, the Mission believes that insisting on the production of biodiesel mainly from soybean oil contradicts the social inclusion components of the program, besides being temerarious in the current worldwide context of scarcity of food and agricultural inputs, and is an additional threat to the right to food.

6. Recommendations

In view of the problems found, the Mission takes the liberty of making the following recommendations to the Brazilian State and the international community:

In the short term:

a) Regarding the human right to work of rural salaried workers, including indigenous rural workers, in the sugar cane sector:

- The Mission recognizes the extremely important work that the Department for Labour Inspection has been carrying out together with the Labour Prosecutor's Office to inspect and safeguard the enforcement of labour laws in the sugar cane production industry. The Mission recommends that the work of these institutions be continued and strengthened and that they are provided with the resources and capacity necessary for the performance of regular inspections paying special attention to the issuance of legal working papers, to adequate lodging conditions and food, to the improvement and adaptation of personal protection equipment (PPE), to the abolition of labour outsourcing, to the eradication of slave labour, child labour, slave-like labour and other degrading and inhuman forms of labour, prioritizing inspection in the areas of agricultural expansion for agrofuel production.
- The urgent passing of the bill # 438, from 2001, proposing an Amendment to the Constitution (changing article 243 of the Brazilian Constitution) which sets forth that rural and urban properties on which slave labour is exploited should be expropriated and the lands given to land reform programs or to housing programs for low-income families.
- Investigate the cases of death of workers in the sugar-alcohol industry due to exhaustion. Present specific suggestions to prevent more deaths. Check the possibility of introducing regulations that render employers legally responsible for cases of sudden death due to exhaustion.
- Render the disease and injury record efficient, so that workers who suffer an injury can receive sick pay from social security by filling in the Occupational Accident Report (CAT).
- Inspect the enforcement of the Federal Court decision on the Social Security Plan that companies in the sugar-alcohol industry must grant to workers.
- Not allow the passing by the Senate of Provisional Presidential Decree # 410 that hampers inspections by the Ministry of Labour and favours informal jobs in rural activities.
- Safeguard the right to education of the children of migrant workers.

b) Regarding the human rights to food, the environment and the self-determination of indigenous peoples, particularly in the state of Mato Grosso do Sul:

- The Brazilian National Foundation for Indigenous Peoples (FUNAI) should treat with extreme urgency the legal process of identification and demarcation of the territories of the Guarani Kaiowá people, guaranteeing security to the officials and technical staff in charge of carrying out this process.
- The Brazilian State should guarantee the access to food of the vulnerable indigenous peoples through the regular distribution of staple food baskets in proper quantity and quality, respecting the dietary culture of these peoples, until public policies (safeguarding territory, generation of jobs and income) have been implemented, creating conditions that would guarantee the right to feed themselves in dignity of Guarani Kaiowás people.
- The Brazilian State should take adequate preventive measures to avoid the impacts caused by the expansion of sugar cane plantations for the production of agrofuels on the rights of indigenous peoples, establishing criteria that take human rights into account when funding or authorizing new projects of the sugar-alcohol industry close to indigenous areas.
- The Ministry for Social Development (MDS) and the Ministry of the Environment (MMA) should guarantee resources for the "Indigenous Portfolio" Project (very small businesses), as well as for a Training Program for indigenous labour in the use of technology.
- The MMA should implement a policy to fight the illegal exploitation of natural resources and to reclaim degraded areas, aiming at restoring the basic conditions for the way of being and living of the Guarani Kaiowá peoples, safeguarding their right to food.
- The MDS, the National Health Foundation (FUNASA) and the state government should establish an agreement to implement specific public policies for indigenous peoples, guaranteeing their broad participation in the formulation of these policies.
- The State enforcement agencies should give top priority to guaranteeing the due protection of indigenous peoples, fighting practices that affect their human rights as a result of the unchecked expansion of sugar cane plantations in the state. Government officials should investigate the cases of violence against members of indigenous communities, punishing the perpetrators.
- The Ministry of Justice should provide effective mechanisms for the protection of the Guarani Kaiowá against practices of criminalizing their struggle for land and for their rights in general.

c) Regarding the right to food, land and work of the settled workers of the biodiesel project in the state of Piauí:

- Access to land: The Piauí State government should guarantee the permanent maintenance of lands in the hands of settled families with secure title deeds.
- Organization: The state must protect the freedom of organization of farmers in associations to face the practices of intimidation and repression by the company *Brasil Ecodiesel*.
- Economic status/earnings: Family producers should be ensured real participation in the negotiation of prices and minimum earnings guaranteed corresponding to at least one monthly minimum wage per family. In order to achieve this goal, we recommend the establishment of transparent criteria for the payment of a fair price (for example, the establishment of a tripartite group to negotiate contracts between the government, corporations and workers/their legitimate representative organizations). Farmers' debts should be cancelled and they should have the possibility of selling their products to the best-paying buyers.
- Technical support: In order for producers to increase their crop yields, they should be given proper and efficient technical support. We recommend that the government, through the MDE, inspects the company *Brasil Ecodiesel*, enforcing it to comply with the technical support regulations established in the National Program for Biodiesel Production and Use (PNPB).
- Production model: The company should allow producers to freely choose their crops.

In the medium term, regarding the rights to food, work and the environment of peasants, rural workers and indigenous peoples:

- Prioritize the support to peasant agriculture, to land reform, to the demarcation of indigenous lands, the diversified production of staples for the consumption of the families to guarantee their food security and the satisfaction of their basic needs, instead of encouraging monocultures for energy production for export. Public policies should make use of the maximum available resources and be designed to meet the needs of peasant family agriculture and to diversify agro-industrial production, instead of only benefiting the export business sector. Land reform, as a precondition for social-economic change to fight poverty in rural areas, has to be resumed and expanded.
- The opportunities to market food products produced by peasant agriculture producers in medium-sized cities should be expanded through farmers' markets, in order to supplement product purchases made by the National Agricultural Products Supply Company (CONAB).

- Advance in the negotiations and legal procedures in order to overcome the organizational and structural causes of the overexploitation of workers, such as payment by productivity, trying particularly to find alternatives to this mode of production throughout the sugar-alcohol production chain.
- Adopt public policies to improve the living conditions and work opportunities in the areas migrant workers come from, for example, effective land reform, strong support to peasant agriculture, improvement of education and vocational training, provision of information on work opportunities and conditions in other areas of Brazil, among others.
- Adopt, at the municipal, state and federal levels, land use planning regulations that prioritize the democratization of access to land and the implementation of land reform, protect and foster peasant family agriculture, protect indigenous lands and the territories of traditional communities, protect natural resources, clearly demarcating the areas that could be dedicated to agro-energy production. These plans should be devised with full participation of the rural population and the organizations representing them.
- Take resolute measures to advance in the process of legalizing the tenure of indigenous lands in the country and adapt all national laws to international parameters and constitutional norms on the rights of indigenous peoples.
- Subject the granting of public incentives for investments by the agro-energy sector, especially those granted by the National Bank for Social and Economic Development (BNDES), to social, environmental and labour criteria for investments which should even be part of clauses in contracts. For example, BNDES should check, before approving funding, that the requesting company is not listed in the register of labour law violators of the Department for Labour Inspection. Considering the extra-territorial human rights obligations of the Brazilian State, these criteria should also be applied in the case of incentives to projects abroad, to prevent Brazilian public resources from contributing to violations of human rights in other countries.
- Effectively regulate the sugar-alcohol industry to make sure that the activities of this industry do not affect the enjoyment of human rights by the most marginalized population and that they instead benefit the whole of society.
- Introduce regulations to restrict and control the purchase of land by foreign companies, setting limits to land and territory concentration.
- Rigorously enforce the environmental law to protect the environment as an "asset of common use", protecting forests, rivers, springs and the biodiversity of the *Cerrado*, the Amazon, the *Pantanal*, the Atlantic Forest, as well as to protect people against

the harmful effects of the criminal spraying of pesticides that affect the crops of family farmers and poison people in areas close to sugar cane and soybean plantations, in addition to protecting the rural workers in these units.

- Revise the current energy policy so that it is compatible with the enjoyment of all human rights. Guarantee broad participation of people in the establishment of priorities so that the latter meet the social needs and are in agreement with local and regional characteristics and potentials, exploring alternatives of decentralized and non-concentrated production and management under the control of peasants and workers.

To the international community:

- Reconsider all incentive policies, such as the mandatory targets of replacing fossil fuels by agrofuels, considering the serious negative social and environmental impacts the expansion of this industry will have on Brazil as a leading country in this sector.

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8. Appendix

8.1. PARTICIPANTS IN THE MISSION

- Dora Lucy Arias – *Coletivo de Advogados José Alvear Restrepo* (Colombia)
- Ulrike Bickel – Misereor (Germany)
- Katrin Ansel – Misereor (Germany)
- Dr. Saturnino Borrás – University of Saint Mary (Halifax/Canada)
- Thomas Fritz – independent expert (Germany)
- Dr. Frank Garbers – independent expert (Germany)
- Henk Gilhuis – ICCO & Kerkinactie (Netherlands)
- Lucia Goldfarb – FIAN Netherlands
- Sofia Monsalve Suárez – FIAN International
- Babacar Ndao – advisor to the small-scale farmers network of West Africa (ROPPA)
- Marie Therese Roggo – HEKS (Switzerland)

8.2. PERSONS AND OFFICIALS INTERVIEWED BY THE MISSION

Jônia R. de Lima, FIAN Brazil

Célia Varela, FIAN Brazil

Enéias da Rosa, FIAN Brazil

Isidoro Reves, Land Pastoral Commission (CPT)

Evanize Sydow, *Rede Social de Justiça e Direitos Humanos*

Magali Godoi, *Rede Social de Justiça e Direitos Humanos*

Horácio Martins de Carvalho, independent expert

Milton José Fornazieri, *Movimento dos Trabalhadores Rurais Sem Terra* (MST)

Carlos Lima, Land Pastoral Commission – Northeast (CPT)

Cândida da Costa, National Rapporteur on the Human Right to Work (ESCE- Rights Platform Brazil)

José Carlos A. Pereira, Migrants Pastoral

José Juliano de Carvalho, USP/Rede Social/ABRA

Prof. Pedro Ramos, UNICAMP

Sergio Sauer, *Terra de Direitos*

Sérgio Schlesinger, FASE

Valéria Burity, ABRANDH

Raquel Luiza Cardoso dos Reis Silva, *Confederação Nacional dos Trabalhadores na Agricultura* (CONTAG)

Moacir Chaves, *Confederação Nacional dos Trabalhadores na Agricultura* (CONTAG)

São Paulo:

a) Civil society

- Carlita da Costa, President of the Union of Rural Employees of Cosmópolis
- Padre Antônio Garcia, Pastoral Work with Migrants
- Elio Neves, President of the Federation of Wage-earning Rural Employees in the State of São Paulo (FERAESP)
- Edivar Lavrati, José Batista, Paulo Albuquerque, Sidnei Niederle, state coordination of the Movement of Landless Rural Workers (MST).
- Francisco José da Costa Alves, Professor of Production Engineering at the Federal University of São Carlos

b) Authorities

- Dr. Marcelo Goulart, Public Prosecutor for Childhood and the Environment / Prosecutor's Office.
- Luiz Antonio Guimarães Marrey, Head of the Department of Justice, state of São Paulo
- Gustavo Ungaro, Executive Director of the Land Institute of the State of São Paulo (ITESP)
- Jurandir Bóia, President of the Fundacentro, Ministry of Labor and Employment
- Maria Cristina Gonzaga, Division of Ergonomics, FUNDACENTRO, Ministry of Labour and Employment
- Rafael Silva, State Deputy, State House of Representatives of the State of São Paulo
- Simão Pedro Chiovetti, State Deputy, State House of Representatives of the State of São Paulo
- Ruth Beatriz Vasconcelos Vilela, Head of the Federal Department for Labour Inspection

Mato Grosso do Sul

a) Civil society

- Carlito, Chief of the Passo Piraju community
- Dr. Zelik Tajber – Coordinator of FUNASA's Multidisciplinary Teams
- Cristiano Navarro, Father Jorge – CIMI
- Professor Antonio Brand – Dom Bosco Catholic University
- Onorail Jeronymo Porto, President of the Union of Rural Workers (Rio Brillhante)
- Visits to the villages of Passo Piraju and Dourados
 - Aline (Guarani, student in Dourados)
 - Rosa
 - Teodora (School Principal)

b) Authorities

- Margarita Nicoletti – Regional Coordinator of FUNAI
- Cícero Rufino Pereira; Dr. Simone Rezende – State Labour Prosecutor’s Office, 24th Region, Public Labour Prosecutor’s Office
- Department for Family Farming – Municipal Administration of Dourados
 - Anastásio Peralta (Guarani, employee)
 - Hermínio Guedes dos Santos (Head of the Department for Family Farming of Dourados)

Piauí

a) Civil society

- Joana Lúcia Feitosa, Gregorio Francisco Borges, Land Pastoral Commission (CPT) in Piauí
- Ambrosinha, Paulo Enrique, Land Pastoral Commission (CPT) in Floriano
- Fazenda Santa Clara Settlement of the company Brasil Ecodiesel – interview with 30 settled workers
- Union of the Rural Workers (STR) of Elizeu Martins and Canto do Buriti
- Company Brasil Ecodiesel Hugo Alexandre (Supervision Administration); Brígida Lima, Agronomist
- Carlos H. Campos, Caritas
- Germano Lizboa de Carvalho, Francisco de Paulo Araújo, Movement of the Landless Rural Workers (MST)
- Judson Barros, environmentalist NGO Funaguas

b) Authorities

- Edvaldo Sagrilo, Brazilian Company of Agricultural Research (EMBRAPA), researcher on family farming
- Father Ladislau Mello, State Department for Education of Piauí, former Director of the INCRA in Piauí (2003-2007)
- Land Institute of Piauí (ITERPI), Regina Lourdes, Land Coordinator; Tadeo Maia, Head of the Prosecutor’s Office
- José Nilton, Deputy Director of the Department for Sugar and Agro-energy, Ministry of Agriculture/Department for Agro-energy.
- Arnaldo Anacleto Campos, Director of Income Generation and Value Addition, Ministry of Agrarian Development/Biodiesel Program.
- Mozart Schimitt, Executive Manager of Energy Development, Petrobras.
- Milton Rondó, Coordinator of International Actions to Fight Hunger, Ministry of Foreign Affairs

8.3. LIST OF ACRONYMS

ABIOVE –	Associação Brasileira da Indústria de Óleos Vegetais [Brazilian Association of the Vegetable Oils Industry]
ABRA –	Associação Brasileira de Reforma Agrária [Brazilian Land Reform Association]
AGU –	Advocacia Geral da União [Union Attorney General]
ANFAVEA –	Associação Nacional dos Fabricantes de Veículos Automotores [National Association of Vehicle Manufacturers]
BNDES –	Banco Nacional de Desenvolvimento Econômico e Social [National Bank for Economic and Social Development]
CADE –	Conselho Administrativo de Defesa Econômica [Administrative Council for Economic Defense]
CAT –	Comunicação de Acidente de Trabalho [Occupational Accident Report]
CF –	Constituição Federal [Federal Constitution]
CIMI –	Conselho Indigenista Missionário [Council for Mission among Indigenous People]
CONAB –	Companhia Nacional de Abastecimento [National Agricultural Products Supply Company]
CONSEA –	Conselho Nacional de Segurança Alimentar e Nutricional [National Council on Food and Nutritional Security]
CONTAG –	Confederação Nacional dos Trabalhadores na Agricultura [National Confederation of Workers in Agriculture]
CPT –	Comissão Pastoral da Terra [Land Pastoral Commission]
DIEESE –	Departamento Intersindical de Estatísticas e Estudos Socioeconômicos [Inter-Union Department for Statistics and Socio-economic Studies]
EMBRAPA –	Empresa Brasileira de Pesquisa Agropecuária [Brazilian Company of Agricultural Research]
ESCE –	Rights Platform – Economic, Social, Cultural and Environmental Rights Platform
FAT –	Fundo de Amparo ao Trabalhador [Worker’s Support Fund]

FERAESP –	Federação dos Empregados Rurais Assalariados do Estado de São Paulo [Federation of Wage-earning Rural Employees in the State of São Paulo]	MAPA –	Ministério da Agricultura, Pecuária e Abastecimento [Ministry of Agriculture, Cattle Raising and Supply]
FETAG –	Federação dos Trabalhadores da Agricultura [Federation of Agricultural Workers]	MDA –	Ministério do Desenvolvimento Agrário [Ministry of Agrarian Development]
FGV –	Fundação Getúlio Vargas [Getúlio Vargas Foundation]	MDIC –	Ministério do Desenvolvimento, Indústria e Comércio Exterior [Ministry of Development, Industry and Foreign Trade]
FUNAI –	Fundação Nacional do Índio [National Foundation for the Indigenous Peoples]	MDS –	Ministério do Desenvolvimento Social [Ministry of Social Development]
FUNASA –	Fundação Nacional de Saúde [National Health Foundation]	MMC –	Movimento das Mulheres Camponesas [Movement of Peasant Women]
IAA –	Instituto do Açúcar e do Alcool [Sugar and Alcohol Institute]	MME –	Ministério de Minas e Energia [Ministry of Mining and Energy]
IBAMA -	Instituto Brasileiro de Meio Ambiente e de Recursos Naturais Renováveis [Brazilian Institute for the Environment and Renewable Natural Resources]	MST –	Movimento dos Trabalhadores Rurais Sem Terra [Movement of the Landless Rural Workers]
IBGE –	Instituto Brasileiro de Geografia e Estatística [Brazilian Institute for Geography and Statistics]	MPA –	Movimento dos Pequenos Agricultores [Movement of Small Farmers]
ICCPR –	International Covenant on Civil and Political Rights	MPT –	Ministério Público do Trabalho [Public Labour Prosecutor's Office]
ICESCR –	International Covenant on Economic, Social and Cultural Rights	MTE –	Ministério do Trabalho e Emprego [Ministry of Labour and Employment]
ILO –	International Labour Organization	NR 31 -	Norma Regulamentadora de Segurança e Saúde no Trabalho [Regulating Norm on Labour Safety and Health]
INCRA –	Instituto Nacional de Colonização e Reforma Agrária [National Institute for Colonization and Land Reform]	OEAS –	Organização dos Estados Americanos [Organization of American States]
INESC –	Instituto de Estudos Sócio-Econômicos [Institute for Socio-economic Studies]	OIT –	Organização Internacional do Trabalho [International Labour Organization]
INPE –	Instituto Nacional de Pesquisas Espaciais [National Institute for Spatial Research]	ONU –	Organização das Nações Unidas [United Nations Organization]
INSS –	Instituto Nacional do Seguro Social [National Institute for Social Security]	PAS –	Plano de Assistência Social [Social Assistance Plan]
IPEA –	Instituto de Pesquisa Econômica Aplicada [Institute for Applied Economic Research]	PETROBRAS –	Petróleo Brasileiro S.A.
ITERPI –	Instituto de Terras do Estado do Piauí [Land Institute of the State of Piauí]	PIDCP –	Pacto Internacional dos Direitos Cívicos e Políticos [International Covenant on Civil and Political Rights]
ITESP –	Instituto de Terras do Estado de São Paulo [Land Institute of the State of São Paulo]	PIDESC –	Pacto Internacional dos Direitos Econômicos, Sociais e Culturais [International Covenant on Economic, Social and Cultural Rights]
MAB –	Movimento dos Atingidos por Barragens [Movement of People Affected by the Construction of Dams]	PNAD –	Pesquisa Nacional por Amostragem de Domicílios [National Survey by Domicile Sample]

PNPB – Programa Nacional de Produção e Uso do Biodiesel [National Program for Biodiesel Production and Use]

PROALCOOL – Programa Nacional do Álcool

SIT – Secretaria de Inspeção do Trabalho [Department for Labour Inspection]

STF – Supremo Tribunal Federal [Supreme Court]

TAC – Termo de Ajustamento de Conduta [Term of Conduct Adjustment]

UDHR – Universal Declaration of Human Rights

UE – União Européia [European Union]

UNICA – União da Indústria de Cana-de-Açúcar [Association of the Sugarcane Industry]



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