



## The human cost of 'super-clean' sugar ethanol

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**Brazil is hailed as a biofuels success story - producing and using ethanol from high yielding crops within the country. But those indigenous families who have been displaced by sugar cane cultivation see things differently**

Cars shoot along a highway that cuts its way through a sugarcane plantation as Farid and his community sit by the roadside. Members of the indigenous Guarani-Kaiowa people from the South-Western Brazilian province of Mato Grosso do Sul, they have been camped here for two months, with nothing but a canopy of refuse sacks on sticks to protect them from the blasting sun.

Why are they here? This 10m verge is the last remaining strip of their ancestral lands, upon which they may legally live as they fight their battle to move back home. Meanwhile vast sugar cane plantations, valued at up to USD\$300 million, are turning this fertile rolling landscape into a monoculture as demand for biofuels rockets up.

### Order and progress?

Brazil, a country renowned for its natural wealth, is almost as famous for its economic inequalities. However during the last 10 years the adage 'Brazil is the country of the future — and always will be' is being proved false. The economy is booming, and agriculture is one of the big contributors. However, despite the millions of urban and rural poor that have been pulled out of poverty, one of the groups who have been left behind in Brazil's race to achieve its national motto 'Ordem e Progresso' (order and progress) are indigenous groups whose land has been taken from them for lack of title deeds.

The issue has been addressed in Brazil but so far attempts at compensation have been met with little success. The Brazilian Federal Constitution, written in 1988, ordered all Indian territories in Brazil to be demarcated by 1993.

'17 years later the government has still not kept its promise,' says Marcos Homero Ferreira Lima, anthropologist for the Federal Public Ministry. 'In Mato Grosso do Sul, 6-700,000 hectares remain to be demarcated,' adds Lima, referring to the process of designating which lands are to be returned to Indigenous communities.



A girl drinking water from a bucket at a roadside camp in Mato Grosso. Photo: Rodrigo Baleia

### Camping by the road

In Mato Grosso do Sul, a number of communities are battling to have their land returned. These people have opted to fight by legal means. Other methods, such as forcibly reoccupying land entail risks. In the last decade a significant number of people have been threatened, assaulted and even shot dead by men they claim to be employed by the current landowners.

Farid's makeshift camp stands in stark contrast to the bustling town of Dourados, half an hour's drive away. The urban centre is flush with big developments, car showrooms and affluent young people dining out in bright modern restaurants. On the outskirts, signs point to the industrial estate where sugar giants such as Sao Fernando have their headquarters.

Agribusiness in Brazil has never seen such a prosperous decade as the last and much of this is due to the biofuel boom. Just 50 years ago, much of this land was forest. Since then land clearing has removed most of the trees. During the last decade a growth in demand for sugarcane based biofuels in Brazil and abroad has brought farmers and investors in droves, all trying to get their share of the profits in this fertile region.

### Alcoholic wealth

Bruno Melcher, of LouisDreyfus Commodities, a multinational working with agricultural commodities, and one of Brazil's biggest sugarcane producers, says: 'In the 70's when we had the first oil shock Brazil looked into an energy matrix substituting crude for alternative fuels and found the solution in sugarcane based ethanol. Brazil's 1976 'Proalcool' programme then promoted the production of ethanol from sugarcane, resulting in a boom in the use of ethanol-powered cars.'

'What is really driving the growth of sugarcane in Brazil is the domestic consumption thanks to the increase of Flex Fuel cars in the market,' says Geraldine Kutas at Unica, Brazil's association of sugarcane companies. The Flex Fuel car, introduced in 2003, runs on either pure ethanol or a gasoline and ethanol blend. 'Each year there are an additional two million Flex Fuel cars on the Brazilian market,' says Kutas, 'representing 90 per cent of all new vehicles.'

The 2009 Ethanol Summit provides figures on where this future ethanol will come from. Of a total of 20 million hectares planted with sugarcane in almost 100 countries worldwide, approximately 4 million are in Brazil. The quantities of cane being harvested are staggering and some believe this is only the beginning. Unica estimates production for 2015-2016 will result in 41.3 billion tons of ethanol - 80 times the current production levels.

### Efficient

At Unica's 2009 Ethanol Summit, Gilberto Kassab, mayor of Sao Paulo, said: 'The benefits of Brazilian ethanol obtained from sugarcane, are well known and undeniable. Not only does it reduce emissions, its famously high productivity means it can yield as much as 8000 litres per hectare of cane.'

Although today most ethanol produced in Brazil is consumed locally due to high prices and government protection, the situation may soon change as markets in Europe and the US realise the greater efficiencies in buying Brazilian.

Melcher says: 'The energy-efficiency of sugarcane based ethanol is 8 times greater than corn ethanol, consumed mainly by the US. In Europe, demand for sugarcane ethanol depends on regulation, so as soon as the mandate comes in there will be a market in Europe.'

### Commodities vs communities

So where does the global commodities market for ethanol leave the local indigenous community? With so much money invested, some farmers and landowners are reluctant to let demarcation teams onto properties and many attempts to reclaim land have ended in lengthy legal battles.

Things may seem bleak for indigenous locals like Farid's community, but there have in fact been some recent successes in demarcation cases.

Ambrosio stands like a king on a hill overlooking his domain in Giuda Roca, half an hour's drive from Dourados. After months of patient roadside protest he and his wife and 18 children have won back a 40 hectare portion of their land. Now, as well as a home, their property includes an outhouse building and a vast prayer house. The land itself glows with the quality of the soil – a deep brickish pink which shines in paint-like puddles when a storm falls. Sitting inside, Ambrosio is thankful for his shelter on his own land. Still, his fight is not over. He wants to get back 11,000 hectares in all because aside from his family 600 more people should be here, he says, from several other reservations.



Sugarcane plantation workers in Mato Grosso. Photo: Rodrigo Baleia

'It won't be easy,' he admits. 'Camping outside in the sun makes you very hot, then the rain makes you very cold. But the future is here. The future is the land.'

### Dreaming of yesterday

Meanwhile, in the nearby Dourados reserve the Cabrera family have not been so lucky. After various failed legal attempts their decision to occupy the land without permission was met with volleys of shots from the landowner's henchmen. In 1975 their land was an area covered by forest. Now it is the site of a sprawling sugar plantation. The last remaining family on it was removed last year.

Nelson Cabrera, local shaman and community leader, dreams of the old days when he used to shoot birds or armadillos there for dinner. His daughter Aliciela recently appeared, with Ambrosio, in *Birdwatchers*, a film supported by [Survival International](#), about the plight of Guarani communities, who have been struggling with rising rates of suicide. Survival International, the world's leading charity supporting the rights of indigenous people, believe these suicides are directly related to the effects on communities of land loss and forced relocation.

Moreno Saraiva Martins at ISA, Brazil's Socio-Environmental Institute says: 'There are no official data on suicide among the Guarani-Kaiowa in Mato Grosso do Sul but local community organisations have reported an average of 50 cases per year.' This is a high figure for a population of less than 30,000 – more than 10 times the British suicide rate.

### Shootings

'This situation here is the most complex, most difficult situation I have come across,' says Vito Comar, ecologist and founder of the IMAD environment and development institution. 'It's one of the worst. There are 30 indigenous reservations in the area with populations expanding, especially since the 1980s. There are people in some of these families who are 85 years old and they've been displaced and seen killings of members of their families three or four times. In some areas they don't even have firewood to cook, and some don't have water and have to go to farms – which are not their farms.'

Unica acknowledges the need for land demarcation but claims that all the companies under its umbrella have had their land legally evaluated before signing contracts. It also says that its companies' plantations are based only on land that was not cleared for this purpose and has already been used as pasture land and was 'degraded' as a result. However, due to the lack of legal deeds in decades past, it is difficult to pinpoint who is at fault.

Industrialisation, land conversion and a booming economy are part of Brazil's modern reality, and there are those who suggest that these local indigenous communities should move with the times. After all, labourers are paid more on sugar plantations than other agricultural employment in Brazil. However, a Sao Paulo state law obliges sugarcane plantations to replace manual harvesting with machines by 2014, so in the future, there may not even be compensatory jobs for people who have lost their land.

Meanwhile Nelson and Farid continue their uncertain fight. What will happen if land is not demarcated soon – are they prepared to wait it out? 'We will be forced to take action,' says Farid. With a little luck his efforts may result in a success story like Ambrosio's for his community, or they might see more bullets and suicides. But if there's one thing they can count on for now, it's a long wait by the road.

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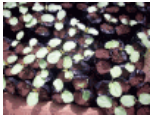
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