

Actors, Interests and Strategies of Brazilian Foreign Policy on Biofuels

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This article aims to examine how the entry of biofuels into Brazil's international agenda came about and which actors and interests have influenced the formulation of the Brazilian foreign policy on biofuels. To this end, the article will be developed in two stages: (1) an analysis of the factors that explain how biofuels came to fit into Brazilian foreign policy; (2) an analysis of domestic and international actors and interests that impact the international strategy adopted by Brazil on biofuels. To conclude, some final considerations will be presented.

Keywords: Biofuels; Brazil; Policies; Regimes; Environment.

Introduction

The search by countries for energy security and the increase of international interest in environmental issues, particularly concerning climate change, have favoured an increase in the world production of biofuels in the last few years. In the period 2000-2009, ethanol and biodiesel production grew from 17.7 billion to 86.7 billion litres (Sorda, Banse and Kemfert 2010). In spite of the difference in expert opinions on the less polluting nature of biofuels – since their impact on soil degradation, deforestation and therefore as a threat to biodiversity are all discussed, it is well-known that fossil fuels are even greater pollutants and comprise the main source of carbon dioxide released into the atmosphere, as well as being a non-renewable energy source.

The international system's favouring of renewable energy sources and of those with a low environmental impact has therefore motivated producing countries to invest in the sector. The international system's favouring of renewable energy sources and of those with a low environmental impact has therefore motivated producing countries to invest in the sector. In

2010, the United States, the world's biggest biofuel producer, launched the new Renewable Fuel Standard (RFS2), which seeks to give continuity to the country's biofuel policy from the Energy Independence and Security Act (2007), whose aim it is to increase conventional biofuel production and invest in the development of second-generation biofuels, which, in the case of the US, is cellulose-based.

Brazil is currently the world's second biggest biofuels and ethanol producer. Together, Brazil and the United States produce more than 80% of the world's ethanol.¹

The Brazilian programme, however, is internationally recognized for its pioneering nature, for its advanced level of development and for producing the most competitive and efficient ethanol of its generation. In spite of the fact that Brazil has 40 years' know-how in the field of renewable fuels, its leadership and drive in promoting these resources internationally are recent and derive both from favourable internal and international conjunctures, and from the interest of actors linked to the sector.

The search for renewable sources is geared towards environmental protection and energy supply on a global scale, but the interests of domestic groups – and even foreign ones – have impacted on the formulation of the country's strategic policy. Thus, the entry of biofuels into Brazil's foreign policy has also happened as a result of these interests being catered for. As Putnam (1993)² points out, success in negotiating international policy lies in the government's capacity to not only meet international pressure, but also the domestic demands of interest groups of influence. It is this combination of interactions that determines diplomatic action in the international system. Given these approaches, domestic structure (institutions, leaderships and society) impacts on foreign policy decisions inasmuch as it determines the agenda's priority issues, the development of objectives and the manner of interpreting the external actions by other States (Amorim Neto 2012).

This perspective can be seen in how the subject of energy production is situated within Brazilian foreign policy. When domestic bioenergy production managed to stabilize and large-scale production was guaranteed after years of attempts by interested groups, it then became situated within a favourable international conjuncture and biofuels started being seen as goods that were also tradable in the global market, which increased the number of actors interested in the sector.

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Biofuels in Brazilian Foreign Policy

Brazil's drive to promote biofuels internationally is recent and derives from foreign and domestic factors. The presence of these products among Brazilian exports occurred when production stabilized internally – which meant the supply became reliable – and because of the increasing international demand for alternative energy sources. It must be stressed that while there was a movement towards greater environmental awareness at this point in time, with global warming as an important reason for the search for new types of energy, on the other hand, there was also economic uncertainty caused by fluctuations in oil prices.

This matter was not new to Brazil; however, it was characterized by steps forward and back until biofuels were incorporated into the national energy mix and later into foreign policy. The idea of using sugar as raw matter for producing fuel began from 1905 to 1920, due to the already problematic oil supply crisis, which stimulated research involving alcohol fuel. At this time, some pioneering experiments were carried out in Brazil, mixing alcohol with ether and petrol and testing the first spark-ignition engines (Menezes 1980). In an attempt to drive forward the research that came out of this, the Vargas government established Decree n^o 19.717 (20/02/1931), which made it compulsory to mix 5% of alcohol to the imported petrol consumed in the country.³ In 1938, this resolution was also extended to petrol produced on Brazilian territory. It must be added that because of the petrol supply problems during the Second World War, from 1942 to 1946 the amount of alcohol mixed in with petrol was raised to 42% (Silva Santos 1998). However, this policy of adding increasingly more alcohol to nationally produced petrol ceased in the 1950s and 1960s⁴ with the end of the war and a return to a normal oil supply.

The interest in alcohol fuel returned in the 1970s because of the crises resulting from the oil shocks. The Brazilian government sought longer-term alternatives to free itself from this dependence and, in 1975, created the National Alcohol Programme (Pro-Álcool),⁵ with the aim of promoting a definitive incorporation of ethanol into the national energy mix. The programme was not only a matter of re-editing the policy of mixing alcohol in with petrol, but aimed at the exclusive use of ethanol as a propellant. In the programme's second phase (1979-1985) more substantial incentive policies were implemented: market reserve, producer subsidies, keeping prices for consumers low and incentives for the production of alcohol-fuelled automobiles.⁶

However, at the end of the 1980s, with the oil price drop and the sugar price rise in the international market, interest in oil substitutes and in the programme declined, mainly due to the costs of keeping alcohol production subsidies, as there was a worsening of the Brazilian economic crisis during this period. With the absence of these incentives, the *usineiros* (sugar plantation/mill owners and sugar-alcohol industry high-ranking employees)

abandoned fuel production and resumed sugar production with the international market in mind (Rodrigues; Ortiz 2006). The interruption in the supply caused an internal problem: the marginalization of alcohol-fuelled automobiles and a crisis of confidence.

The resumption – with credibility – of the idea of alcohol-fuelled Brazilian cars only occurred with the advent of cars with flex-fuel engines in the early 2000s. The international context was also favourable: replacing fossil energy with renewable ones was being discussed worldwide and the market price of sugar dropped. The most latent preoccupation was whether supply could be guaranteed in case of an international rise in the price of sugar, which could potentially divert the production, as had previously occurred. Bi-fuel engine⁷ technology was the solution to this. Still in the Fernando Henrique Cardoso government, lower Tax on Manufactured Products (Imposto sobre Produtos Industrializados (IPI)) rates were set for alcohol-fuelled or flex-fuel⁸ vehicles. According to data from the Associação Nacional dos Fabricantes de Veículos Automotores (National Association of Motor Vehicle Manufacturers), in 2003, the year in which cars with flex technology were launched, internal sales of this type of car amounted to 3.7%. In 2004, sales rose to 21.6%, in 2005 to 50.2% and in 2006 to 78.1%, reaching 85.6% in 2007.⁹

Flex-fuel technology had therefore allowed a rise in the internal consumption of both ethanol and petrol with added anhydrous alcohol, which justified the increase in sugarcane production from 325 million tonnes in 2000 to 458 million in 2006.¹⁰ The increase in production was caused not only by the internal demand, but also by the international market. In 2005, the US government launched the Energy Policy Act, which created aims for the compulsory use of renewable fuels and facilitated the importation of Brazilian ethanol, as the US corn (maize) ethanol industry was not yet consolidated. The impact was considerable. From 2008-2009, ethanol exports reached a record volume of 4.7 billion litres.¹¹

This context marked the arrival of the issue of biofuels in Brazilian foreign policy. President Luis Inácio Lula da Silva's government, in particular, inaugurated a period of dynamicity and international sector growth. At the time of the presidential re-election in 2006, the president of União da Agroindústria Canavieira (UNICA ([Sugarcane Agroindustry Union]), Eduardo Pereira de Carvalho, recognized that the sector was going through “an exceptional moment”, which would contribute to the election. The representing organization of entrepreneurs of the sugar-alcohol sector considered Lula “the sector's poster boy”.¹²

During his first term of office, themes such as the fight against hunger and the fight for a permanent seat on the UN Security Council were emphasised. There was also a “toughening” of the negotiations with the US on the FTAA proposal, the priority of the theme of Latin American Integration and the increase in relations with Southern countries (Vigevani and Cepaluni 2007). In the second term, representatives of senior chancellery posts remained,¹³ but there was a reformulation of the agenda's priorities. From 2007, the

Brazilian request for a permanent seat in the Security Council and the fight against hunger waned and gave way to the incorporation of new issues, such as that of biofuels, which gained prominence in the country's international agenda.¹⁴

But what reasons might explain Brazil's persistence in defending and internationally promoting ethanol, if the country became self-sufficient with regard to oil from 2006? As Kohlepp (2010) points out, it is not just a matter of commitment to global environmental demands. For him, Brazil wants to occupy a strategic position by means of a product that is coming to be an alternative source of energy. In the 1990s, Nitsch drew attention to the fact that the Pro-Álcool did not make energetic sense due to the low cost of oil at that moment, and that it only survived because of government incentives.¹⁵ To him, Brazil's Pro-Álcool policy went beyond the interest of specific sectors; it was a question of congeniality and goodwill, of national pride, of wanting to show that dependence on oil had been overcome and, nowadays, of wanting to act as an international leader. For this, Brazil still needs to tend to current demands, as was made evident in the G-8 summit, when president of the European Commission José Durão Barroso requested guarantees from president Lula that biofuel is actually sustainable (Abramovay 2008). The main criticisms of the Brazilian programmes are: the threat of destruction of nature reserves, diversion of food production areas for the production of ethanol¹⁶ and, especially, the sustainability of planting and producing.

These issues have made the government think about different directions for biodiesel and about ways in which to establish ethanol as a product of greater international acceptance. Interest in biodiesel also occurred in the context of the energy crisis of the 1970s, and with the aim of further reducing oil consumption and diversifying the national energy mix. However, the product's production and disposal costs did not allow the project to follow through at the time, since Pro-Álcool was already consuming the State's attention and subsidies. The programme resumed in 2002 due to an increase in demand and world production (particularly European), and to the interest in strengthening family agriculture (Leite and Leal 2007).

In 2003, the government created an Interministerial Work Group charged with developing studies on the use of vegetable oil for energy. The work group's partnership with business associations made possible the creation of the Programa Nacional de Produção e Uso de Biodiesel (PNPB (National Programme for Biodiesel Production and Use)), later consolidated by Law nº 11.097/05, which made the introduction of biodiesel in the national energy mix possible. The commercialization of biodiesel in the international market was a PNPB issue, which demonstrated the interest of introducing biofuels into the Brazilian foreign policy agenda¹⁷ at that time. Since then, tax and financial benefits aimed at stimulating investments in the sector and guaranteeing the participation of family agriculture in the production chain have been granted.

The two main national biofuel projects are therefore at different stages and result from different processes. The alcohol fuel project is transitioning from a subsidizing paradigm, based on state regulation mechanisms, to a technological paradigm, made favourable by the sector's deregulation process from 1996. Incentives by means of subsidies have been substituted by financial incentives for technological modernization.¹⁸ Producers began to seek improvements in the technical efficiency of production and greater coordination in the sector after almost 40 years' experience (Paulillo et al. 2007).

In contrast, biodiesel is an incipient project, with investments and economic viability studies still in process. As a result, production costs are still high, making national biodiesel not very competitive in the international market.¹⁹ However, differently from previous times, there is now a state effort to leverage the project. Sector incentives follow the subsidizing paradigm, e.g. tax exemption concessions and funding for the construction of industrial units, but with a focus on regional development and social inclusion. The biodiesel production project still seeks to avoid monoculture and to encourage the participation of small farmers. In this spirit, in order to participate at auctions at which Petrobras buys biodiesel in advance, participating companies must present a social responsibility seal of approval required by the government, which is granted provided these companies confirm that part of the raw matter purchased by them has come from family agriculture (Abramovay and Magalhães 2007).

The idea of a social responsibility seal is also aimed at the international market, which has demanded sustainability guarantees from biofuel as stated above. In 2007, Brazil became a member of the International Biofuels Forum with the aim of discussing international norms for these products, seeking infrastructure and logistics solutions and establishing a programme of action for its use in other countries. Petrobras also invested in a pilot-project, in Rio Grande do Sul, of decentralized alcohol production integrated with food production, in which family farmers participate. Further, the government is also discussing the implementation of a socio-environmental seal for ethanol. However, the success of government initiatives also depends on the perception of domestic actors, such the *usineiros*, regarding modernization and the sustainable development of ethanol. A group of São Paulo industries, members of UNICA, set up a partnership with the Instituto Ethos, with the aim of monitoring its social responsibility indicators (Ortiz 2006). Cases of sector mechanization to avoid the practice of setting fire to plantations and to guarantee ethanol as a clean energy have also been observed: "In 80% of plantation areas, this procedure (fire) is still employed, which frequently causes illnesses of the respiratory tract and enormous CO₂ emissions, as well as spreading soot, the cleaning of which uses up an enormous amount of water." (Kohlhepp 2010, 239).

Another problem lies in the international biofuels market. There is a small number of

producing countries – production is concentrated in Brazil and the USA – that are also great consumers and therefore use production more for their internal market than for export. This prevents the product's trade from becoming more dynamic. The absence of an international regulated market that might, above all, make possible a global standardization of bioenergy products, also makes the global commercialization of biofuels difficult. Standardized rules would make commercial transactions easier as they would avoid countries setting different standards for buying the product, which results in an increase in production costs, does not favour competition and, as a result, hinders the entry of new producing countries and an increase in trade.

In 2012, the Brazilian government launched the Plano Estratégico do Setor Sucroalcooleiro (Strategic Plan for the Sugar-alcohol Sector), which aims to remedy some of these deficiencies, particularly as far as the external supply is concerned. The plan's incentive measures is aimed at: training agriculturalists to use new production techniques and existing technologies, renewal of plantation areas geared towards recuperating productivity, expanding the processing capacity of mills and production areas, and developing cellulosic ethanol production techniques. The plan is clearly aimed at increasing ethanol production and its energy efficiency. It is a policy of sector support, whose production was stagnated due to the economic crisis that began in 2009 – the time when there was a drop in foreign investments –, and the recent agricultural crisis caused by environmental problems and ageing of the sugarcane plantations. According to the Ministry of Agriculture, the actions do not only seek to serve the national market, but also the potential of the foreign market for ethanol.²⁰

Thus, we note a greater consolidation of the Brazilian biofuels programme, which allowed its incorporation into the country's international agenda. As they entered into its exports, biofuels widened Brazil's participation in the network of international institutions and directed the government's internal actions. During this process, factors in the conjuncture that favoured it can be identified, such as the energy crisis, concern for the environment and the national programme's stabilization. The next step is to further the analysis of the actors and interests that were present in this process. In the next section, we will seek to examine how several groups contributed (or not) to placing biofuels among the objectives of Brazilian foreign policy.

Brazilian Bioenergy Policy: Focus on Actors and Interests

The international community's interest in biofuels is justified by the following: the successive proofs of the unstable geopolitics of oil, the harmful effects of its price fluctuations and the growing concern with environmental matters. As we have already mentioned, the

possibility of reducing the emissions of greenhouse gases is a relevant issue in arguing for the use of biofuels. However, the inclusion of biofuels in the international market involves the interests of several actors. Among the international groups that most impact the actions of Brazilian foreign policy are the scientific community, international institutions, countries that produce and consume biofuels and oil-producing countries.

Regarding the environmental argument, the scientific community and international institutions are crucial actors influencing political actions by States. Studies and scientific statements by researchers of the international community serve both to legitimize political postures and to undermine them. According to Haas (1992b, 3), “an epistemic community is a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area.”. Epistemic communities begin to acquire importance from the moment they are incorporated into the political game to elucidate the intricate questions that require technical knowledge in order to be duly understood. International governance increasingly involves complex themes that motivate foreign policymakers to base their decisions on technical foundations deriving from these communities, making the implementation of strategies favourable to them easier.

Thus, among the cases that outline the influence of said communities is the biofuels issue, impacted on by studies on food security, environmental protection and climate change. Such studies tend to foster an apocalyptic logic that has a bearing on the whole of humanity and generates pressure both by countries and international institutions, and by the civil societies of states, in the sense that their representatives act for the benefit of their respective security. It is an international regime based on practical association, in which two or more nation-States converge in the interpretation of what must be avoided and not on what must be attained together (purposive association) – that is, each party constrains itself in order to constrain the other (Nardin 1984, 9). However, this type of regime only emerges when governments share some epistemic criteria concerning *why* and *how* they must cooperate.

Epistemic communities are therefore vital to Brazil’s strategy of internationally promoting ethanol. In the global market, ethanol is seen as the most viable renewable fuel for substituting petrol in the short term, or for being added to it. Studies show that Brazilian ethanol, particularly that produced from sugarcane, produces 91% less CO₂ than oil, while ethanol produced from corn produces only 18% less, which has a positive impact on the international market (Goldemberg; Guardabassi 2009). As we previously saw, Brazil is attempting to adapt to environmental demands from the international market by launching ideas such as the socio-environmental label, incentive plans for using new technologies and for developing a new generation of biofuels and, finally, the creation of an International Biofuels Forum as an information exchange channel.

However, as Abromovay (2008) states, Brazilian ethanol can be considered a challenger in the international market, and will therefore have to face increasingly restricting barriers. This situation worsens with agricultural protectionism. The absence of international regulation makes the product subject to tariff barriers. The World Trade Organization (WTO) treats ethanol as an agricultural product, which makes it subject to the taxes and subsidies on this kind of product. There are also the different environmental laws and technical specifications required by each country for trading in this commodity. Brazil has been adapting to these demands and, *pari passu*, trying to modify them according to its own interests. In the WTO, it is fighting to have ethanol classed as an environmental product (Hira 2011), but there is resistance, especially on the part of producing – and even consuming – countries.

In the last few years, the biggest importers of Brazilian-produced ethanol have been the European Union and the United States. The USA is the world's biggest energy producer and consumer, and is investing in the production of corn ethanol. In 2005, the US government's Energy Policy Act set as a compulsory aim the use of 7.5 billion gallons of renewable fuels by 2012, mostly deriving from ethanol (Masiero and Lopes 2008). In 2007, there was a renewal in energy policy objectives with the Energy Independence and Security Act, which resulted in an update of the Renewable Fuel Standard (RF2/2010). The proposal's aim is to reach 36 billion gallons of renewable fuels by 2022, with special attention devoted to the new generation of cellulosic biofuel originating from waste, pulp and straw. However, US demand for fuel is greater than the internal production of ethanol, which requires the product to be imported, Brazil being its greatest supplier. The agreements of understanding between the two countries are centred on the question of fuel supply in between corn and sugarcane harvests: the aim is to keep the price of ethanol lower than that of petrol in both countries' internal markets. However, divergences regarding the subsidies granted to producers remained and made the entry of Brazilian ethanol difficult until an apparent and transitory change of policy occurred in 2011.

After 30 years' protectionism, the US Congress did not extend the legislation in force that guaranteed subsidies for internal producers and tariffs on imported ethanol. As a consequence of this, Brazil has an expectation that there will be a substantial increase in ethanol exports to the USA, although this is not a definitive measure.²¹ The cut in subsidies seeks to reduce the country's debt, although it must be emphasised that the lobbying carried out by Brazil in the US Congress by means of the Agência Brasileira de Promoção de Exportações e Investimentos (Apex-UNICA (Brazilian Trade and Investments Promotion Agency and UNICA)) partnership took place in 2008 with the aim of promoting the image of Brazilian ethanol in the world. With this objective, two UNICA representation offices opened outside Brazil: in Washington and Brussels. Representation in Washington seems to have gained great advances. The European market, however, has presented greater obstacles.

The EU's engagement with the environmental issue has propelled investments in the energy field and justified the internal market's protection barriers. Production of ethanol fuel went from 528 to 1731 million litres in the period 2004-2007. In 2007, France reached the top position with 539 million litres per year, compared with Germany's 394 and Spain's 348 million litres. In these countries, production is mainly from beet, cereals and excess from wine production. In 2008, the EU published a goal plan to fight global warming that expects a 20% reduction in the emission of greenhouse gases. To this end, it was established that by 2020 one fifth of the energy produced by it must be generated from renewable sources and 10% of the transport system must use biofuels.

In spite of investments, there is a projection that the volume of ethanol produced within the EU will not be sufficient to supply the internal market, which may leverage Brazil's supply to the region.²² In the meantime, companies of the food and automobile industries, oil lobbyists and European biofuel producers are making the product's import into the country difficult (Kohlhepp 2010).

As well as biofuel producing and consuming countries, oil producers have also been considered in Brazil's strategic actions. The aim is to raise these countries' awareness of the advantages of producing biofuels not only because of the environmental arguments, but due to the very question of energy security, since oil is an exhaustible resource.²³ The importance of these actors for Brazilian foreign policy is due to more than one reason: firstly, because of the weight that the support of this highly capitalized group would lend to the development of the bioenergy sector; secondly, the global oil market is an obstacle to biofuels. It is the most consumed energy resource, with an already consolidated and organized market with a large-scale production and still plentiful supplies, while biofuels programmes are still comparatively incipient (Hira 2011).

In the domestic sphere, a few actors also stand out. Pro-Álcool included the immediate interests of the State, of the *usineiros*, and of agricultural machinery and automobile industrialists. The sugar-alcohol and industrial sectors were the ones that mainly benefitted from the programme. The *usineiros*, in particular, sought to modernize their industrial parks and diversify their products in the market so as to reduce the damage from the sugar industry's constant crises. New distilleries were built with State credit being made easier, service stations selling subsidized alcohol were set up and there were tax incentives for putting alcohol-fuelled cars on the market.

Indeed, one of the endogenous interest groups with a preponderant influencing role in Brazilian energy policy is that of the *usineiros*. Their interests are represented mainly in sectoral business organizations such as Cooperativa dos Produtores de Açúcar e Álcool de São Paulo (Coopersucar (Sugar and Alcohol Producers of the State of São Paulo)) and UNICA. As we pointed out, UNICA is an actor with direct participation in the implementation of

the country's international actions by means of a partnership with Apex-Brasil.

Since the Brazilian foreign policy on biofuels could only be made viable with an internal stabilization of production, our aim is to examine the performance of the groups involved in this process. As we seek to analyse the sugar-alcohol sector's capacity to influence the formulation of public policies and national foreign policy, we must highlight that there were two distinct periods in the *usineiros*-government relationship. The first one was the period from the 1930s until the redemocratization process in the late 1980s, when there was a centralized politico-institutional structure and a decision-making arena concentrated on the Executive, which enabled the activities of the larger representation groups or of those that had direct access to the president or the government's higher ranks. In the second period, post-1988, there was a decentralization process that widened the decision-making arena and the action by other agents (governors, mayors, deputies, senators) in policy formulation. Such institutional changes diversified the groups that had access to the decision-making process (Barros and Moraes 2002).

Thus, at the time the Pro-Álcool was inaugurated, it was the big landowners who had greater power of influence over public policies. From the democratic opening onwards, although their influence weighed less, new regional groups also acquired the ability to act.²⁴ It was in this context that president Fernando Collor de Mello managed to unite the sector's great interest groups.²⁵ The president's political and family origins, which were linked to the sugar-alcohol sector of the state of Alagoas explained the support given to the *usineiros*. In 1986, when he was state governor, there were a number of policies that favoured the sector, among them tax subsidies for a 10 year period.²⁶

During his presidential administration, Collor de Mello promoted a process of deregulation of the sugar-alcohol sector, which pleased some of the *usineiros* who believed that such measures would correct distortions in the market. The general context was marked by the lack of interest in subsidy policies and by the appliance of practices with neoliberal tendencies in face of the State's serious economic and tax crisis. Companies with smaller technological capacity ceased their activities or were incorporated into greater units, which had the capacity and practice of redirecting part of the production to the sugar market during periods of highs in international prices (Paulillo et al 2007, 541). This was the period of transition from a phase of strong state regulation to a phase of the sector's greater liberalization. The Instituto do Açúcar e do Álcool (Sugar and Alcohol Institute) ceased its activities in 1990, the government stopped intervening in the relations between mills and suppliers and stopped dictating the rules of the sugar and alcohol markets. There are currently no government subsidies for ethanol production, but the sector's integration with Petrobras and financing from the Banco Nacional de Desenvolvimento Econômico e Social (BNDES (National Bank for Economic and Social Development)) have remained (Abramovay 2008, 4-5).

However, the *usineiros*/State relations continued and were made evident in the 1994 presidential elections. The Partido dos Trabalhadores' (PT (Workers' Party)) government programme continued to include land reform and to fend off support from the *usineiros* and big landowners. Copersucar donated \$1 million to Fernando Henrique Cardoso's campaign, who, in contrast, once in power, granted subsidies of over US\$ 1 billion to the *usineiros* via Petrobras. Still during his administration, in 1996, the Frente Parlamentar Sucro-Alcooleira (Parliamentary Sugar-alcohol Front), which advocated a return to Pro-Álcool, was created. At this point, a change in the PT's position towards *usineiros* took place, so that in the 2000 municipal elections, 24 out of the 38 PT mayors elected in the state of São Paulo committed during their campaign to support Pro-Álcool.

However, there were differences among parliamentarians about reactivating the programme. The image of Pro-Álcool remained negative in national popular opinion, which hindered more vigorous political actions in its defence. But as the price of sugarcane in the international market was low, the *usineiros* insisted that the government resume alcohol production incentives. In order to appease pressure for a greater consumption of the billions of litres of alcohol that the mills produced, in 1998 the government granted a US\$ 400 million subsidy to enable the *usineiros* to stock the alcohol, thus forcing an increase in the market price. The government also stipulated that the percentage of ethylic anhydrous alcohol mixed in with petrol, compulsory at 22% in all the Brazilian territory, be raised to up to 24%. In the following year, the volume of the mixture rose to 26%.²⁷

Such favouring guaranteed Fernando Henrique Cardoso the *usineiro* sector's support in his re-election, in spite of the change of posture of candidate Luis Inácio Lula da Silva towards the Pro-Álcool. The participation of the *usineiros* in the legislative elections to the Chamber of Deputies and the Senate was also considerable. There was support to the campaigns of deputies and senators who committed to revive Pro-Álcool.

In the 2002 elections, the entrepreneurs of the *usineiro* sector and the Partido dos Trabalhadores grew slightly closer. The ex-mayor of Ribeirão Preto, in the state of São Paulo, Antonio Palocci, who had a close relationship with the region's *usineiros*, left the mayorship to coordinate Luiz Inácio Lula da Silva's campaign. Palocci managed to establish a close relationship between the leadership of the PT and the sugar-alcohol sector. Lula, in his turn, was emphatic in his treatment of Pro-Álcool:

We have made a commitment to activate Pro-Álcool in this country. We do not want to let go of a less polluting renewable energy source that generates lots of jobs. We are proposing, along with the *Sindicato dos Metalúrgicos* (Steel Workers' Union), a goal plan that contains the renewal of the automotive fleet and the activation of the alcohol-fuelled car programme. (Silva 2002)

Final Considerations

Given what has been presented, it is clear that biofuels have significant advantages for the countries that produce them, as well as consisting in soft power, inasmuch as they permit a greater political and economic visibility of States. There is a tendency to seek renewable energy sources that might guarantee environmental and energy security for the international system. In Brazil's case, the chosen energy raw matter was sugarcane. It was already produced in the internal market on a large scale, the sector's revenue was significant for the balance of trade, the soil and climate conditions are favourable, it is technically more viable than other sources, there are strong interested internal groups and it has conquered international acceptance.

The difficulties encountered throughout the project have not allowed it to be buried, mainly due to the actions by domestic sectors that were in constant contact with the decision-makers and executors of the country's policy. A panoramic view of the history of national energy shows that, most of the time, the *usineiros* were side by side with the political powers that be. It was like this during the military period (a fact that decisively contributed to the birth of Pro-Álcool) and then in the redemocratization process. They had a role in Collor de Mello's election, they were on Fernando Henrique Cardoso's side in the two elections he won and repeated this strategy when they gave Lula da Silva their support in the 2002 and 2006 elections.

In the sphere of national foreign policy, the aim is to make Brazil a reference in the supply of ethanol. To meet the global supply, it is not sufficient to develop the sugar-alcohol sector at a national level. It is necessary to invest in diffusing technology so that other countries may become producers. Thus, entrepreneurial and state actions on biofuels have been promoted throughout the whole world. It is not uncommon for Brazilian diplomatic missions to present themselves in parliaments aiming to divulge the idea of biofuels and presenting Brazil as a trustworthy partner. There are also experiences of technology exchanges, with research in the United States, Japan, African countries, European countries and Latin America.

On the other hand, the position of groups (non-governmental, national and international), whose actions still hinder the advancement of biofuels in the international market must be understood.

Finally, we can conclude that the way in which these issues are dealt with in Brazilian foreign policy results from the dovetailing of, on one side, an endogenous level of negotiation historically marked by the strong presence of the *usineiro* sector, by the pro-development political will of some governments and by Brazil's strategic interest in being present in the international system; with, on the other, an exogenous level of relations where environmental

issues and subsequently issues of renewable energy result from diffuse – but still incisive – action by epistemic communities on a global level and from the interest of States.

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Notes

- 1 Cai barreira ao etanol brasileiro nos Estados Unidos, *GI*, 24th November, 2011.
- 2 On two-level games, see Robert D. Putnam (1993).
- 3 This measure can also be understood as a solution to the sugar crisis and the period's economic recession.
- 4 In the early 1970s, the mixture was only 2.9% alcohol in the whole country and 7% in the city of São Paulo.
- 5 The programme was also benefitted from the drops in sugar prices in the international market.
- 6 Car assembly plants agreed to produce alcohol-fuelled automobiles with the Brazilian government's guarantee that it would provide fuel and keep prices lower than those of petrol.
- 7 They take any mixture of hydrated alcohol and petrol with anhydrous alcohol (adequate for mixing with petrol).
- 8 The IPI for vehicles between 1000 and 2000cc with alcohol or flex engines was 11%, while for petrol-fuelled cars it was 13%.
- 9 Data available at <http://www.anfavea.com.br/Index.html> (accessed March 3, 2012).
- 10 Data available at http://www.udop.com.br/download/estatistica/publicacoes/balanco_nacional_cana_agroenergia.pdf (accessed June 22, 2010).
- 11 Governo segura exportação de etanol, *O Estado de São Paulo*, March 1st, 2012.
- 12 The government took the biofuel issue to international meetings and argued for the opening of protectionist markets to Brazilian ethanol. In a speech delivered in Jamaica, during the closure of a seminar on biofuels, Lula classed the *usineiros* as “important international figures” and criticized the manner in which past administrations dealt with the sugar-alcohol sector. Usineiro é personalidade, diz Lula, *O Globo*, August 10, 2007.
- 13 Minister of External Relations Celso Amorim and secretary-general of the Ministry of External Relations Samuel Pinheiro Guimarães.
- 14 We believe that the biofuels issue occupied a distinct place in Brazilian diplomatic actions from the second administration. Throughout 2005, the issue was not much referred to in the diplomatic arena. 2006 was marked by specific situations, but a more significant volume of actions and the theme's presence in the country's international agenda can be seen from 2007 onwards.
- 15 At the end of the 1980s, the production cost of petrol was almost three times lower than that of alcohol. See Manfred Nitsch (1991, 135).

- 16 This criticism was mostly directed at ethanol, since biodiesel involves oilseed cultivation, which is also used for food production.
- 17 Available at <http://www.biodiesel.gov.br/docs/cartilha.pdf> (accessed June 22, 2010).
- 18 The legislation still guaranteed a market reserve for alcohol when it made the addition of 20-25% alcohol to internally produced petrol compulsory.
- 19 The EU has produced biodiesel on a large scale since 1992 and is the world's main producer and consumer.
- 20 Governo lança plano para aumentar oferta de álcool combustível, *Rede Brasil Atual*, February 24, 2012.
- 21 It was decided that voting on the Farm Bill will resume at the end of 2012.
- 22 Available at: http://www.mme.gov.br/mme/galerias/arquivos/publicacoes/pde_2008_2017/PDE2008-2017_VOL2_CompletoM.pdf (accessed June 20, 2010).
- 23 Presidente da UNICA: países árabes, que enxergam longe, sabem que o petróleo não será a energia do futuro, *Unica*, March 2nd, 2012.
- 24 Due to the ascension in parliament of the decision-making process, the regional sugar-alcohol sectors (of states and municipalities) also began to act as agents of pressure.
- 25 The big *usineiros* feared the land reform of candidate Luiz Inácio Lula da Silva.
- 26 At that time, state tax on sugar mills was 56%. After the agreement signed by Fernando Collor, this figure fell to 4%.
- 27 Provisional Measure 1.662/98.
- 28 Resolution nº 37/07 of the Conselho Interministerial do Açúcar e do Alcool (CIMA, Interministerial Council for Sugar and Alcohol) set the volume of alcohol added to petrol at 25%.
- 29 In 2006, the bank made R\$ 1.9 billion available for the sector. In 2007, it was *circa* R\$ 3.5 billion.
- 30 Municipal Complementary Law n. 5.206/2006.
- 31 Ministry of Agrarian Development, Ministry of Mining and Energy, Petrobras, Embrapa (Brazilian Agricultural Research Agency).

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