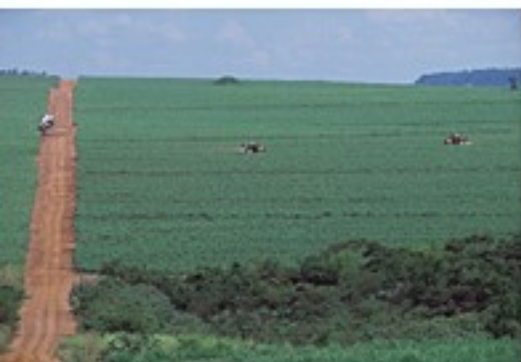




Food & Energy Sovereignty Now:

Brazilian Grassroots Position on Agroenergy



by Camila Moreno with Anuradha Mittal

Acknowledgments

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The Oakland Institute

Food & Energy Sovereignty Now: Brazilian Grassroots Position on Agroenergy

While official accounts of the Brazilian government's experiment with biofuels—particularly ethanol—laud it as a global model for sustainable biomass production, it is increasingly being criticized and opposed by national social movements and civil society. To challenge the official rhetoric, this policy brief aims to bring critical voices to the forefront of the debate, explore their arguments, and raise awareness among US organizations, citizens, and public officials about what is going on in the “Biofuels Republic of Brazil.”

Summary

This policy brief presents Brazilian civil society's perspective and the South's critical analysis on biofuels, and addresses the issue at the following three levels:

1. Regional: focuses on a geopolitical analysis and implications of the Brazil-US ethanol alliance.
2. Global: examines the corporate strategy that has come to determine the main official discourse on agroenergy and how to tackle climate change.
3. Grassroots Resistance: describes how grassroots groups are challenging the current framing of energy security issues, and presents their proposed agenda for energy security built upon food and energy sovereignty for “cooling down the earth.”

Brazil: an Emerging Power Giant

Brazil is the global leader in ethanol exports, providing 70 percent of the world's supply in 2006. According to the latest data (harvest 2006/2007), the production of bio-ethanol (from sugar cane) was 17.8 billion litres 3.4 billion of which was exported, with 56.2 percent exported to the US—despite the imposed tariff of US\$0.14 per litre (US\$0.54 per gallon).

In addition, Brazil recently announced the discovery of *Tupi*, a massive oil basin offshore reserve, which will make the country's oil and gas reserves the world's eighth largest—turning it into a net oil exporter. According to the chief executive of Petrobras, the state-run oil firm, “Brazil's reserves will lie somewhere between those of Nigeria and those of Venezuela.”

Discovery of this oil field could boost Brazil's overall reserves by more than 60 percent and has raised speculation of further discoveries in Brazil's largely unexplored offshore oil and gas basins. Petrobras, the operator of Tupi (with 65 percent share of the field), has said that tests have confirmed recoverable reserves of between 5 to 8 billion barrels of oil and gas, which would nearly match

Norway's 8.5 billion barrel reserve base. This finding has fostered talk of Brazil applying for OPEC membership (Organization of the Petroleum Exporting Countries).¹

In the context of increasing international demand for oil and gas, led by the growing economies of China and India, accompanied by a decline of production peaks and a high price, this latest discovery has introduced a new element in the balance of power in any international negotiation that Brazil will engage in from now on, just as it redefines the terms of previous negotiations.

Regionally, this find will bolster the US' energy partnership with Brazil, leveraging the latter against the leftist governments of other oil rich countries in the continent—Venezuela, Ecuador, and Bolivia—whose political agendas of resource nationalism are not aligned with that of the United States.

President Luiz Inacio Lula da Silva, known simply as President Lula, was steadfast in his emphatic denial that the discovery of the Tupi oil and gas reserve would alter Brazil's biofuel policy, stating: "A diversified energy matrix is of utmost importance these days and all we could want as it provides energy security and gives maximum bargain capacity to our country in negotiating its proper position in the new global energy scenario." And sure, there are some deals to be negotiated down the road.

A US Congressional Delegation to Brazil: What's on the Agenda?

A bipartisan delegation of US Congress members visited Brazil from November 26 through December 1, 2007 with the goal to move the biofuel/ethanol agenda forward. Meanwhile, at the domestic level in the US, the Democratic and Republican presidential candidates are seen as holding profoundly different long-term approaches to energy policy. The Democrats' goal for energy policy largely entails reducing oil consumption, and has become inseparable from the goal of reducing the risk of climate change. For the Republican candidates, energy policy centers primarily on producing more energy at home, particularly corn-based ethanol.²

The delegation's trip to Brazil was organized and headed by Congressman Eliot Engel (Democrat – NY), who serves as Chairman of the Foreign Affairs Sub-Committee for the Western Hemisphere in the US House of Representatives.³ The itinerary included major capital cities and tourist destinations

¹ Petrobras executives have said that production can be expected for the 2012-2013, though many industry analysts say the field's peak production will not occur before 2020. Brazil's big oil find was listed under the Ten Most Underreported Stories in 2007 by Times Magazine (December, 24th, 2007, p.42)

² Edmund L. Andrews. "Candidates Offer Different Views on Energy Police," *New York Times*, November 28, 2007.

³ Congressman Engel serves on the Energy and Commerce Committee. He also serves on the Foreign Affairs Committee and is the Chairman of the [Subcommittee on the Western Hemisphere](#). In addition he serves as Vice Chair of the Democratic Task Force on Homeland Security. He is the founder and Co-Chair of the House Oil and National Security Caucus, which is seeking clean, energy efficient alternatives to America's over-reliance on oil.

including Salvador, Bahia; Iguaçu Falls on the triple border with Paraguay and Argentina; Manaus in the hearth of the Amazon Forest; Brasília; and Rio de Janeiro, to ensure the handshake at Petrobrás, the Brazilian oil giant.

Whether further progress in the form of taking concrete steps towards a common political agenda on clean energy policy will result from this official visit has yet to be seen. Most likely, the backdrop of scenic views (considering the tourist destinations selected) will be used to legitimize, at least visually, the strategic partnership with Brazil.

“Brazil and the United States account for approximately 70 percent of global production of biofuels. Our two countries can and must lead in these areas.”

—Christopher McMullen, Deputy Assistant Secretary for Western Hemisphere Affairs

Randy Kuhl, (Republican-NY), refuting opponents who have mocked the trip as an opportunity for the 11 House participants to stay in elegant hotels and enjoy a riverboat tour of the Amazon, said in a conference call with Brazilian reporters that he “wanted to see firsthand how the South American nation has weaned itself from its dependence on foreign oil by using ethanol made from sugar cane.” According to Kuhl, “participants barely have had enough time to sleep as they travel from meeting to meeting with government officials to discuss biofuels and efforts to fight drug smuggling.”⁴

The delegation’s schedule included a visit to both houses of the Brazilian Federal Congress in Brasília to strengthen bilateral ties and discuss trade, biofuels, and other regional issues. The US-Brazil partnership in the hemisphere was the theme of the meeting between the legislators. “The Americas are a powerful bloc if we all work together; Brazil and the US will lead the way,” said Rep. Engel.⁵ At the end of the meeting, Rep. Engel was said to be favorable to reducing Brazilian ethanol taxation in the American market, stating “negotiations should be made to put an end to ethanol’s tariffs.”⁶

While both Brazil and the US lead the world’s production of ethanol, Brazilian productivity (from sugarcane) is 6,300 liters per hectare compared to 3,200 liters per hectare in the US (from corn).⁷ Despite being more energy efficient, Brazilian ethanol made from sugarcane is not competitive in the US domestic market because it is subject to high import taxes meant to protect American farmers. However, each gallon of pure ethanol blended into gasoline in the US earns the blender a tax credit of US\$0.51 per gallon, and additional tax incentives exist for small producers.

⁴ Erin Kelly. *Massa Derides Kuhl's Trip to Brazil, Calls it a Junket*, November 30, 2007. Democrat and Chronicle online at: www.democratandchronicle.com/apps/pbcs.dll/article?AID=/20071130/NEWS01/711300381/1002/NEWS

⁵ *US Congressional Delegation Visits Brasília*, US Embassy in Brazil Press Release, November 30, 2007.

⁶ American and Brazilian Parliamentarians Debate Biofuels, Brazilian Senate Press Room, November 30, 2007. http://www.senado.gov.br/agencia/internacional/en/not_418.aspx

⁷ UNICA/BNDES.

Further, as part of the US Energy Policy Act of 2005 (P.L. 109-58), Congress established a Renewable Fuel Standard (RFS). Each year, the RFS requires a certain amount of renewable fuel to be blended into gasoline. For 2007, the mandate is 4.7 billion gallons; by 2012, the requirement is 7.5 billion gallons. The vast majority of this mandate will be met using ethanol. As of today, however, it is impossible to meet US renewable fuels blending targets with present technology and domestically-produced raw materials.⁸ The current White House position is to sustain the imposed tariff of US\$0.14 per liter (US\$0.54 per gallon) on Brazilian ethanol until 2009. Dropping the tariff would boost the supply of ethanol in Florida, because it would be cheaper to ship it from Brazil than truck it from the Midwest. However, as Engel observed, “there are some obstacles to be removed towards free trade between the two countries.”⁹

“The United States is anxious to learn from Brazil. Brazil has made efforts to have independence on energy and the United States is quite behind in this path. We are anxious to know how you came through to this political decision, which are the problems you are facing and what Brazil's future needs in energy terms are” said Engel.

—American and Brazilian Parliamentarians Debate

Biofuels, 11/30/2007

Other than the Brazilian Senate press room event and a recreational lunch at Pelourinho, the touristy afro-cultural district in Salvador, Bahia, no other events on the Congressional tour were open to the press. All discussions were held in closed-door meetings with government officials and industry representatives, despite the announcement by the US Embassy that, “as a member of the Energy and Commerce Committee, Congressman Engel would hold various meetings related to biofuels in addition to promoting US investments in Brazil.”¹⁰

Despite the delegates’ mission to fully examine the Brazilian biofuels experiment—a number of obvious key stops were absent from the itinerary.

The Real Hot Spots: What the US Congressional Delegation Missed

The delegation did not visit the burning sugar cane fields, a grim picture of a twenty-first century plantation, where harshest labor conditions for migrant laborers coexist with not-so-rare occurrences of slave labor. While the shocking work conditions—some 500,000 workers toil from March to November stooped over in the tropical sun harvesting sugar cane to make ethanol—along with pollution from the burning fields are the most widely publicized effects of the expansion of sugar cane plantations,¹¹ there are other related impacts that are easily visible.

⁸ Mario Osava, Brazil-US: A Giant Shadow over Ethanol Politics, IPS News Service, April 2, 2007.

⁹ “American and Brazilian Parliamentarians Debate Biofuels,” Brazilian Senate Press Room, November 30, 2007. http://www.senado.gov.br/agencia/internacional/en/not_418.aspx

¹⁰ *Ibid.*

A drive through the countryside reveals how the expansion of agribusiness is turning millions of hectares of formerly natural ecosystems, including the Cerrado (grasslands) and the Amazon, into one major monoculture. Other impacts include displacement of rural populations, destruction of traditional livelihoods, increase in rural violence and forced evictions, to massive losses of biodiversity, deforestation, water depletion, desertification of soils, and so on.

The expansion of monocultures under a corporate-controlled industrial agricultural system is seen as the main driving force determining access to and control over common natural resources (land, water, forests, biodiversity, oil, gas), and is at the root of nearly all socio-environmental conflicts in Brazil—as is the case throughout the rest of Latin America. According to the Resistance to Agribusiness Forum, “The agribusiness model follows the criteria set by the global market, and we are being forced to adopt it as the only means of development and progress for our countries, although it comes with humanitarian and ecological impacts of catastrophic proportions.”¹²

Currently, at least 80 percent of Brazilian biodiesel is made out of soy. The Brazilian biodiesel program includes a mandatory mix of raw material produced by small scale and family farming, called the “social seal fuel” (combustível selo social)¹³, and the program receives government subsidies to promote social inclusion and the diversification of feedstocks. Despite the stated intent, the biodiesel program, in fact, offers an additional market to the strongest and most consolidated chain of agribusiness—soy—which is controlled by US corporate giants such as Cargill, Archer Daniels Midland (ADM), and Monsanto.

Soy expansion in Brazil (and neighboring countries such as Paraguay, Bolivia and Argentina) is a key culprit behind deforestation, a root cause of global warming. Soy fields are devouring the largest remaining tropical forests in the world. First, virgin Amazon forest is cleared to extract and sell valuable tropical wood, followed by burning (and its damaging emissions) to open new pasture areas to cattle raising, done mostly in previously public lands. Once the pasture areas are degraded, which happens very fast since the Amazon soil is very fragile without the shade of the forest, it is overtaken to grow soy. Brazil's growing role as the world's largest beef producer and exporter is, in great part, due to the illegal and violent dynamics of land acquisition for cattle raising expanding throughout the Amazon Forest, progressively paved by soy.

¹¹ Michael Smith and Carlos Caminada, “Ethanol’s Deadly Brew,” *Bloomberg Markets*, November 2007. www.bloomberg.com/news/marketsmag/mm_1107_story3.html

¹² See complete report on the Resistance to Agribusiness Forum, www.resistalosagronegocios.info/docs/PoliticalSynthesis-ForumofResistancetoAgribusiness.pdf

¹³ Mandatory mix of 2 percent of biodiesel on all Brazilian diesel started on January 1, 2008. This has created a national captive market of estimated 1 billion liters/year.

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Considering the push to expand sugar cane for ethanol and soy for biodiesel, it has been argued that the biofuels frenzy “is an explosive mixture to industrial monocultures.”¹⁴ It is important to note that none of these impacts and devastated landscapes were visible from the destinations chosen for the Congressional delegation’s stop-overs. Similarly, in a recent visit to Brazil, the United Nations Secretary General, Ban Ki Moon, at the last minute cancelled his visit to the city of Santarém in the Amazon region—the epicenter of soy expansion and home to Cargill’s largest soy exporting complex— where the violent impacts of agribusiness include the assassination of the catholic missionary Sister Dorothy Stang.¹⁵

An American citizen, Sister Dorothy Stang, was assassinated on February 12, 2005 for defending the Amazon and rural workers and was immediately recognized as the most prominent activist to be murdered in the Amazon since Chico Mendes in 1988, emerging as a new rainforest martyr. She had worked in the Amazon for 37 years opposing corrupt logging companies in the region, and was an outspoken critic of land grabbers and illegal loggers who use intimidation and violence to force small landowners and indigenous peoples off their lands. The struggle to stop deforestation in the region has cost the lives of many other activists, rural workers, and community leaders.

The delegation did not visit the fields where cane is grown, much less seek out farmer input. Not even the bare minimum was done to pretend that they were doing due diligence. If the Congressional delegation did not wish to have a true testimony of what the biofuels fever is really all about, one wonders about the main purpose of the delegation's trip.

Brazil and the United States Forge an “Ethanol Alliance”

Brazilian President Lula’s visit to Camp David in March 2007 sealed what has been dubbed the “ethanol alliance” between the United States and Brazil.¹⁶ Aimed at promoting greater cooperation between the

¹⁴ Sérgio Schlesinger and Lúcia Ortiz, *Agribusiness and Biofuels: An Explosive Mixture – Impacts of Monoculture Expansion on bioenergy production in Brazil*. FBOMS (Brazilian Forum on NGOs and Social Movements for the Environment), 2006. At: www.natbrasil.org.br/Docs/biocombustiveis/biocomb_ing.pdf

¹⁵ A coalition of civil society, grassroots movements and indigenous peoples wrote a public letter to Mr. Ki Moon, protesting the cancellation of his trip. Few days later in Valencia, Spain, at the meeting of the UN International Panel on Climate Change, Mr. Moon referred to the Amazon as a “suffocated” ecosystem, suffering from global warming; this reference, nonetheless, was not made in the written report he was launching.

¹⁶ *Memorandum of Understanding Between the United States and Brazil to Advance Cooperation on Biofuels*, US Department of State, Office of the Spokesman, March 9, 2007. <http://www.state.gov/r/pa/prs/ps/2007/mar/81607.htm>. Also see *Joint Statement on the Occasion of the Visit by President Luiz Inácio Lula da Silva to Camp David*, White House Press Release, March 31, 2007. <http://www.state.gov/p/wha/rls/prsrl/07/q1/82519.htm>

two countries on ethanol and biofuels, the agreement promotes a bilateral partnership on research/development, promotion of the biofuels industry through feasibility studies and technical assistance, and the creation of a world commodity market for biofuels through greater compatibility of standards and codes.

At Camp David, both presidents discussed the reduction of agricultural subsidies—the main impediment to the conclusion of the Doha Round of the World Trade Organization (WTO)—and international standards for foreign trade of ethanol, a technical step to define it as the first commodity in the emerging agroenergy global market.

Ethanol, Energy, and Climate Change Politics

Set in the broader context of a great business opportunity and maintaining US hegemony in the region, the ethanol's promoters are creating a solid base for the commodity's future by manufacturing favorable public opinion, starting with smoothing over differences between the Left and the Right: witness the unusual affinity between President Lula and Bush despite their ideological differences.

The “ethanol alliance” was able to overcome ideological opposition between the two heads of State—Lula being the most Leftwing politician ever elected president of Brazil, and Bush one of the most conservative presidents in recent US History. It seems their opposing political views would not get in the way of this new “energy cooperation.”¹⁷ This partnership between Brazil and United States sheds light on how the politics of energy/climate change is defining a new political frontier for our times, diminishing prior ideological constraints, as if the production of energy had nothing to do with the society that will use it.

A clear sign of this affinity and the emerging tropical leadership was the announcement in late June that Brazil would reengage its nuclear energy program. As President's Lula framed it:

¹⁷ Public hearing on United States-Brazil Relations, September 19, 2007 - Rayburn House Office Building, testimony by Paulo Sotero, *Director of the Brazil Institute of the Woodrow Wilson International Center for Scholars*

"Brazil can afford the luxury of becoming one of the few countries in the world to master the entire uranium enrichment cycle and, from there, I think we will be much more esteemed as a nation."¹⁸

Brazil has some of the world's largest uranium reserves. However, this announcement was followed by the absence of any military threat to the country, and was clearly not a matter of much importance to the US, given Brazil has historically been a friend and has a record of a good neighbor policy with the US.

New Energy Deals In a Shifting World Order

On October 9, 2007, the US Congress unanimously approved the bipartisan House Resolution 651 HI, stating that following the oil shock of the early 1970s, Brazil reduced its energy vulnerability by diversifying its energy sector through sugar-based ethanol. The centerpiece of the resolution is "cooperation on biofuels," and it urges strengthening of a strategic partnership between both countries, praising Brazil's leaders for being decisive and setting up Brazil not only as a regional leader but a global partner.¹⁹

Authored by Congressman Eliot L. Engel (Democrat-NY), the resolution recognizes the strategic relationship between the United States and Brazil and the wider meaning and importance of the Memorandum of Understanding on biofuels cooperation that the two countries signed in March 2007. In the words of Chairman Engel:

"For years, Brazil has *flown below the radar* in the United States. We never paid much attention to what was happening in the largest country in South America. But I believe that we are reaching the end of this period of ignorance and neglect and that we, in America, are finally *waking up* not only to Brazil's importance, but also to *how natural this relationship should be*. Outside of the United States, Brazil is the largest democracy in the hemisphere. Secretary of State Condoleezza Rice has called Brazil "the regional leader and our global partner."²⁰ (emphasis added)

The use of the military metaphor, *flown below the radar*, leaves no doubt that biofuels/ethanol politics is conceived by the US to fit into its larger Energy Security strategy aimed at reducing dependence on foreign oil and gas reserves. Even though non-fossil or clean sources of energy are to be introduced progressively—as this transition is forced by oil and gas depletion, the escalating costs of pumping and transporting remaining reserves, and the cost of the warfare required to further

¹⁸ Reuters, Brazil to invest \$ 500 mln. in nuclear-powered sub, July 10th, 2007. <http://www.alertnet.org/thenews/newsdesk/N03232022.htm>

¹⁹ House Resolution 651 HI, October 9, 2007. <http://www.state.gov/p/wha/rls/rm/07/q4/94355.htm>

²⁰ Ibid.

explore oil fields in some regions—the renewable sources are quite far from being an effective substitute given the current level of dependence on oil, gas, and coal—the main energy and raw material matrix of the globalized economy.

A country's agricultural capacity (meaning the availability of its arable land and water) to produce biofuels and to guarantee a steady supply to international markets, as in the case of Brazil, is an increasingly important factor in negotiating a stronger role in the emerging new world order. Agroenergy fields, as part of an “energy security strategy,” are already defining a global geopolitical order in the South.²¹

Brazil as a Decisive Player

The importance of ethanol cannot be understated as a means to Brazil's rise as a political force in the twenty-first century.

Brazil has played a key role in the global promotion of biofuels by negotiating toward the development of an international market for ethanol. And even though Brazil's foreign relations policy is leveraging its capacity for biofuel production to reap political benefits—to gain a permanent seat at the United Nations Security Council, for example—agroenergy is being promoted domestically as “beyond ideology,” and is supported by the oddest political alliances (as with Bush) for the sake of “clean, renewable, and thus peaceful” energy.

Already, renewable energy constitutes an unmatched proportion of Brazil's energy matrix. A full 45 percent of the total energy produced and consumed in Brazil comes from non-fossil sources, compared to only 14 percent of renewable sources share on average in the world energy matrix, and a timid 6 percent average for the OECD countries.

The importance of ethanol cannot be understated as a means to Brazil's rise as a political force in the twenty-first century.

Brazil's high morals on “renewables” come from the following distribution of the energy sources that account for the total national supply:

²¹ See the *Geopolitics of Agrofuels*, Position paper of the first international meeting of southern organizations to discuss agroenergy and food sovereignty. Quito, Ecuador, June 2007. Available at: www.accionecologica.org; in english: www.wrm.org.uy/subjects/biofuels/Quito_Manifest.html

Oil	37.9 percent
Sugarcane (ethanol and co-generation of bio-electricity)	14.6 percent
Wood and other organic feedstocks	12.4 percent
Hydroelectric Power plants	14.8 percent
Gas	9.6 percent
Coal	6.0 percent
Other renewables	3.0 percent
Nuclear	1.6 percent

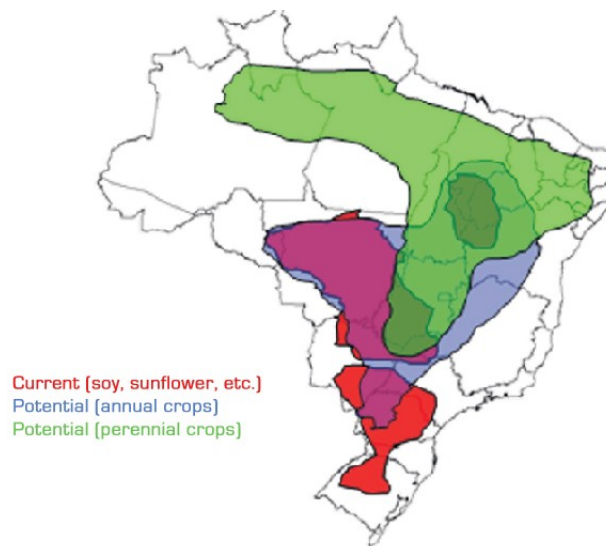
*ABDI, 2007 (Brazilian Agency for Industrial Development)

Today, Brazil effectively has the largest fleet of flex fuel cars in the world: ethanol accounts for about 40 percent of the liquid fuel used in light transportation (Otto cycle vehicles), considering vehicles that solely consume ethanol fuel and the mandatory 25 percent ethanol mixed in to all regular gasoline. More than 95 percent of Brazil's new cars leave the factory with flex fuel engines. The country's current leadership is devoted—and with the introduction of the US House Resolution, quite firmly rooted—in the Pro-Ethanol (pró-alcool) program, which was first promoted by the military regime following the oil shock of the early 1970s. At that time, the Pro-Ethanol program was a way for Brazil to reduce its energy vulnerability by choosing sugar-based ethanol to diversify its energy sector and power its automobiles, and at the same time favor sugar barons from rich agricultural families and large land owners who were suffering from low prices of sugar on the international market. Sugar producers have dominated the elite economic and political strata in the country since the first sugar mill was installed in the country in 1532.²²

Today what makes Brazil distinct from any other country is that ethanol/biofuels are a whole State project. “Agroenergy” unifies the discourse of several state agencies, from public research to market regulation, and falls under the central coordination of the Chief-of-Staff of the Cabinet, who supervises all ministries that deal with the issue including agriculture, environment, energy, industry and trade, science and technology, and even defense—because energy is seen as a matter of national security.

²² Brazil has been requiring the use of alcohol as a fuel for motor vehicles since the 1930s to support sugar growers and as a national energy alternative to oil, which was found only in Brazilian territory in the 1950s. However the big push came in 1975, when Programa Nacional do Álcool Próalcohol started a program that gave consumers tax breaks to buy ethanol powered cars and guaranteed profits for producers by fixing prices and buying all of their production. Lula gave ethanol a new boost in 2003, as scientists worldwide released studies about global warming. In addition to its foundation based upon heavy subsidies and military dictatorship, an important element of Brazil's ethanol competitiveness is the genetic variety of sugar cane, which came from Argentina, used to boost production during the initial pró-ethanol program.

To secure its share in the emerging global industry of clean energy, Brazil has adopted quite an aggressive strategy on agrofuels, from combining public and private sector interests to set up a strategic regional partnership with the US, to its Agroenergy Plan (2006-2011), the most ambitious public policy on agroenergy in the world. The Plan was conceived²³ with the goal of consolidating country's leadership on the so-called first generation (biofuels, bio-ethanol, and biodiesel) and to lead the development of second generation cellulose ethanol with important agro-biotech support (seeds and enzymes).



Areas Currently Under and Suitable for Agroenergy Production²⁴

The official figures have been drastically altered since the release of the National Agroenergy Plan (at the end of 2005): the initial figure of 200 million hectares that were considered “socially acceptable” for the expansion of agroenergy crops (sugar cane, oleaginous seeds for biodiesel and plantations of eucalyptus and pine) has been revised to a more “modest” estimate of 90 million hectares.

Sugarcane monocultures today cover 6.9 million hectares, with an average of 50 percent designated for sugar production and the other 50 percent to ethanol. In recent calculations on land availability, the government estimates that “only” 53.4 million hectares are suitable for potential expansion of bio-ethanol, out of which 11 million hectares should be excluded for environmental

²³Plan was masterminded by former Minister of Agriculture, Roberto Rodrigues, and now with the Inter American Commission on Ethanol.

²⁴ *Plano Nacional de Agroenergia 2006-2011*, p. 51, 2da edição revisada, Ministério da Agricultura, Pecuária e Abastecimento, Secretaria de Produção e Agroenergia.
www.biodiesel.gov.br/docs/PLANONACIONALDOAGROENERGIA1.pdf. In red: current areas with soy, sunflower, etc; blue: potential areas for annual agroenergy crops and green: potential expansion for perennial (palm oil, eucalyptus for coal, etc)

restrictions, leaving the remaining 42 million hectares as “more than enough” to meet the world demand by 2025. This total includes 25-30 million hectares of currently degraded pastures that would be “recycled” for sugar cane production, with, according to the government, *no further expansion* over the threatened areas such as the Cerrado and the Amazon.²⁵ But as we explored earlier, sugarcane expansion has already had a domino effect on changes in land occupation.

Ethanol as an Integrating Force in the Region

The Memorandum of Understanding (MOU) signed in March 2007 between the US and Brazil aims to promote greater cooperation on ethanol and biofuels in the Western Hemisphere, including multilateral efforts to advance the development of biofuels in other countries through assistance for building domestic industries. Latin American countries targeted for the United States-Brazilian technical assistance and for establishing and/or expanding sugarcane plantations and mills are the Dominican Republic, El Salvador, Haiti, St. Kitts and Nevis. According to the official line, the goal is to promote capacity for local production and consumption of biofuels and to create jobs, reduce dependence on fossil fuels, and spur economic development.²⁶ However, an examination of the broader forces acting in the region shows that it goes beyond local production and consumption.

“Brazil is paving the way in transforming ethanol into an internationally tradable energy commodity. An improved bilateral relationship is not only necessary and beneficial for Brazilian interests, but US interests as well. The bilateral dialogue is increasingly a two-way street. The United States continues to set the agenda for the international arena; however, Brazil is a decisive player in defining the terms on which that agenda is discussed.”

—Roberto Abdenur, former Brazilian Ambassador

Brazil’s support of ethanol as the new force for economic and political integration of the Americas is sustained by president Lula with determined obstinacy. In addition to the promotion of biofuels, he has also become personally committed to a “visionary” project of unifying the Americas through sugar cane and biomass industry.

In addition to Lula, there is a non-government actor, the Inter American Commission on

²⁵ Décio Gazzoni, an agronomy engineer with over 30 years experience as a researcher for EMBRAPA (the public agriculture research and development company, the largest of its kind in the world) and in charge of the preparation of the national agroenergy programme, declared that *“we must be pragmatic and allow reforestation of the Amazon with African palm tree plantations... which will enable production of biodiesel”* (Dinheiro Rural, year III, no. 25, November 2006).

²⁶ Christopher McMullen, Deputy Assistant Secretary for Western Hemisphere Affairs, US-Brazil Relations: Forging a Strategic Partnership, Remarks to the Brazil-US Business Council, Washington, DC, October 17, 2007. www.state.gov/p/wha/rls/rm/07/q4/94355.htm

In addition to Lula, there is a non-government actor, the Inter American Commission on Ethanol, that shares the similar vision for the region.²⁷ Its members include Jeb Bush; Roberto Rodrigues, former Brazilian Minister of Agriculture and mentor of the National Agroenergy Plan; and Luis Moreno, president of the Inter American Development Bank. Prior to joining the government, Rodrigues was the president of the Brazilian Agribusiness Association (ABAG). The purpose of this Commission is to foster understanding between the public and private sector, aiming to set the specifications, standards, and regulatory framework for future international ethanol market. The Commission's membership is the true representation of interests behind the ethanol industry and its political leanings.

The Inter-American Development Bank (IDB) is another actor strongly promoting and financing biofuels production in the region. The IDB's April 2007 study, *A Blueprint for Green Energy in the Americas*, reports that some Latin American and Caribbean countries have shown "great interest and promise" in the development of biofuels.²⁸

The IDB study asserts that while the sugarcane harvesting season in Central America is shorter than in Brazil, Costa Rica, El Salvador, and Guatemala have efficient sugar industries and could produce significant sugar-based ethanol. Costa Rica and Guatemala house 44 percent of Central America's ethanol processing factories.

Within the Caribbean region, the largest ethanol plants are located in Jamaica and the Dominican Republic. Jamaica has exported the largest amount of ethanol to the United States, most of it reprocessed hydrous ethanol from Brazil.

Benefiting from free trade agreements such as the Caribbean Basin Recovery Act, Caribbean and Central American countries can export ethanol to the US with no tariffs because such imports do not exceed the agreement's benchmark 7 percent of US domestic production.²⁹ Under the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR), signatory countries (Costa Rica, the Dominican Republic, Guatemala, Honduras, Nicaragua, and El Salvador), continue to share duty-free access for some ethanol exports to the United States under conditions established by the Caribbean Basin Initiative (CBI), but exports from Costa Rica and El Salvador enjoy specific allocations.

²⁷ Other actors supportive of ethanol/biofuel in the region and backing it up as a great opportunity for rural development is the regional secretariat of the United Nations Organization for Food and Agriculture (FAO), headed by José Graziano, former minister for the Hunger Zero program, and the Inter-American Institute for Cooperation on Agriculture (IICA), a lead actor in the promotion of the Green Revolution in the region.

²⁸ IDB Report, April 2007.

²⁹ Bravo, Elizabeth, "Agrocombustíveis, cultivos energéticos e soberania alimentar na América Latina," *Expressão Popular*, São Paulo, 2007.

In the future, those free trade agreements could spur indigenous ethanol production in Central America, which would result in the social, economic, and environmental problems already being experienced elsewhere.

The countries party to the Central American Free Trade Agreement (CAFTA) are the very countries where the IDB is promoting biofuels most strongly: Panama, Honduras, El Salvador, Guatemala, Costa Rica, Dominican Republic, and Nicaragua. Together, they account for 700,000 hectares of area already planted with sugarcane, most of it processed for sugar production. The area under sugarcane cultivation in these countries is expected to jump to 1.05 million hectares, growing 50 percent in total.

On the corporate side, the Brazilian agribusiness and industrial conglomerate Dedini has expressed its goal to expand in the Central America and Caribbean region.³⁰ Dedini is responsible for about 80 percent of Brazil's ethanol production and more than 30 percent of the world production, and intends to increase exports—its potential markets being California (via Central America); the Asian/Pacific region, especially Japan and Korea; and the European Union. Other Brazilian agribusiness groups, supported by foreign investments and regional plans for biofuels, are renting lands, establishing sugarcane fields, and opening new mills in the region. Ethanol, along with heavy infrastructure support (roads, ports, tanks for storing, etc.), appears to offer new business opportunities that are being introduced under the rubric of “rural development” programs.³¹



Supplying the world market with renewable energy is becoming the main integrating force in the Americas, quintessentially expressed in the terms of the Memorandum of Understanding between the US and Brazil. While catering to the energy security strategy of the United States, it is an opportunity for the Brazilian agroindustrial conglomerates to export sugarcane ethanol and sell technology through this new fuel corridor.

³⁰ www.dedini.com.br

³¹ Brazil is also helping promote a ‘biofuel revolution’ in Sub-Saharan African countries such as Angola, Mozambique, Burkina Faso, Congo, and others, by providing technical agricultural assistance. Also, many US organizations and foundations are investing heavily to promote a new Green Revolution for Africa. Elenita Daño, *Unmasking the New Green Revolution in Africa: Motives, Players and Dynamics*, Third World Network and African Center for Biosafety, 2007.

Fueling the US Demand

In January 2007, President Bush announced the US target to reduce petroleum consumption by 20 percent in just 10 years, while also calling for a sevenfold increase in the current production of over 18 billion liters of ethanol.

Additional demand for ethanol has already resulted in a sharp increase in corn prices, the main source of ethanol in the US. Corn shortages have also raised the price of soy, corn's normal substitute for animal feed. Higher prices for both grains are reflected in increased prices of meat, milk, and dairy products. Higher costs for corn and soy are creating problems for corporations dependent on these commodities. Livestock and packaged-food companies have also started pushing back, blaming biofuels for increased grain costs and for hurting their earnings and profits. In late June 2007, Dean Foods Co., H.J. Heinz Co., Kellogg Co., Nestle USA, Pepsico Inc., and Coca-Cola Co. sent a letter to US Senators saying that increased use of corn-ethanol would impact their "ability to produce competitively available and affordable food."³²

Global food prices climbed 37 percent in 2007 on top of a 14 percent increase in 2006,³³ according to a study based on export prices for 60 internationally traded foodstuffs made by the Food Price Index of the Food and Agriculture Organization of the United Nations. The new dimension and nature of likely "oil shocks" in the future is made evident by high cooking oil prices, which are already dramatically impacting the total calorie intake of a large part of the world's population in the South.

Why Cane-Ethanol?

Cane ethanol is attractive because the methods used for Green House Gas (GHG) emission calculations (at a micro level) show that Brazilian sugarcane ethanol saves the most CO₂ of any biofuel available.

Negotiations around the Fuel Quality Directive, currently underway at the European Union (EU), could result in a blending percentage much higher than the current standards mandatory in all EU countries. EU countries tend to rely more on biodiesel—produced mainly from rapeseed and sunflower—with Germany being the world's largest producer, though for domestic consumption only.³⁴

³² Lauren Etter, "Ethanol Craze Cools as Doubts Multiply", *Wall Street Journal*, November 28, 2007.

³³ Keith Bradsher, "Oil Quandary: Costly Fuel Means Costly Calories", *New York Times*, January 18, 2008.

³⁴ Corporate Europe Observatory (2007). The European countries have taken the lead in setting targets for increasing the use of biofuels, so that they can rapidly meet their international commitments to reduce greenhouse gas emissions. These binding targets (5.75 percent and 10 percent of biofuels in the transport matrix for the EU by 2010 and 2020 respectively. See: Directive 2003/30/CE European Parliament on the promotion of the use of biofuels and other renewable fuels for transport. <http://europa.eu.int/scadplus/leg/en/lvb/l21046.htm>

Following intense civil society mobilization in 2007 to challenge the negative impacts of biofuels fever, as well as expert debates and new calculations considering direct and indirect effects of land use,³⁵ the EU was forced to review its policy. Growing public awareness of scientific concerns over current calculation methods could impact biofuels' win-win image, as sold by industry and governments.

In the broader context of competitiveness in the next global industry—clean power—cellulosic ethanol sets the technological frontier for what is called the second generation of biofuels. Commercial availability in the next 7 years will rely heavily on increased biomass production per hectare and strong biotech/GMO support for accelerating enzymatic processes, especially fermentation.

Dependence on biomass for co-generation of fuel and electricity will produce an entire alcohol-chemical supply chain in the future. In other words, just about everything that is currently produced out of oil and gas will be reproduced from ethylene made out of ethanol.

Allowing ethanol into the US without penalties or special requirements would, over time, act as a catalyst for increased global production with broad social and environmental impacts felt abroad. It is therefore pertinent to ask whether when the US Congressional Delegation claims that it is essential to lift tariffs that are preventing Brazilian ethanol's access to the US market, is it really expressing environmental concerns and a true commitment to a consistent clean energy policy? What has brought together a bipartisan delegation to visit Brazil and push for sugarcane ethanol to have easy access into the US market?

Biofuels: A Trojan Horse for Free Trade

International entities from the United Nations Conference on Trade and Development (UNCTAD) to the United Nations Food and Agriculture (FAO) are all nurturing biofuels initiatives using a “development” framework, when in fact biofuels appear to be the central driver behind free trade agreements. To assist with design and implementation of pilot programs, these organizations are supporting biofuels for reasons other than the cited “growing concerns over climate,” “finite fossil fuel reserves,” and “energy security strategies.”

Using the pro-ethanol program as a free trade agenda was clearly flagged in the United Nations Development Programme's (UNDP) Human Development Report 2007-2008, launched in Brasilia in

³⁵ Energy and Transportation Department of University of California, Berkeley, “Greenhouse gas (GHG) emissions from indirect land use change (LUC)”, January 12, 2008. Memo at: http://www.arb.ca.gov/fuels/lcfs/011608ucb_luc.pdf

November 2007. The report, *Fighting Climate Change: Human Solidarity in a Divided World*, explicitly states:

“International trade could play a much larger role in the expanding markets for alternative fuels. Brazil is more efficient than either the European Union or the United States in producing ethanol. Moreover, sugar-based ethanol is more efficient in cutting carbon emissions. The problem is that imports of Brazilian ethanol are restricted by high import tariffs. Removing these tariffs would generate gains not just for Brazil, but for climate change mitigation.”³⁶

Using an illustrative framework to avoid dangerous climate change, the Human Development Report suggests that developed countries should cut greenhouse gas emissions by at least 80 percent by 2050 and 30 percent by 2020 from 1990 levels, while developing countries should cut emissions by 20 percent by 2050 from 1990 levels. However, these cuts would occur from 2020 and they would be supported through international cooperation of finance and low carbon technology transfer. This can open up the way to a “technology bazaar” under the International Property Rights Regime.³⁷

Boosting international trade to promote global warming mitigation policies has turned ethanol and other biofuels into a Trojan Horse for setting up a global emissions market and carbon credits trade, without addressing the root causes of climate change.

The UNDP report expressed the UN's fundamental position to tackle climate justice through trade, and its release was timed with the climate change agenda slowly gaining entry in the World Trade Organization (WTO) negotiations and discussions on the Kyoto Protocol, following the meeting on climate change in Bali, Indonesia in December 2007.³⁸

This move is expected to have a large impact on the United Nations–sponsored International Conference on Biofuels, to be held in Brazil in the second half of 2008. Promoted by the US, EU, Brazil, South Africa, China, and India (the second largest sugarcane ethanol producer in the world), conference preparations include Brazil's push to turn ethanol into “an environmental good” under WTO rules in the ongoing Doha Round negotiations, and endless discussions around the

³⁶ Nearly 400-page Human Development Report came out just a week before the world's nations convened at the United Nations Climate Change Conference in Bali, Indonesia, December 3-14, 2007, to negotiate a new climate treaty. Report available to download at www.undp.org

³⁷ *UNDP Wants Climate Justice Through Trade*, by Ashok Sharma, November 27, 2007. Financial Express, New Delhi.

³⁸ *UNDP Wants Climate Justice Through Trade*, by Ashok B. Sharma, 11/27/2007, The Financial Express, New Delhi at: www.financialexpress.com/news/UNDP-wants-climate-justice-through-trade/244056/

“sustainability” criteria (social and environmental standards in certification), to secure a larger share in the growing international market for biofuels.

Boosting international trade to promote global warming mitigation policies has turned ethanol and other biofuels into a Trojan Horse for setting up a global emissions market and carbon credits trade, without addressing the root causes of climate change.

In a transition to a post-oil society, agroenergy as the new basis for the United States' expanded engagement with Brazil is becoming an international issue. The confluence between Brazil and the US on ethanol exemplifies how energy/climate change politics have less to do with environmental concerns than with the emergence of a new power balance in the region and guaranteed energy security. This is likely to have a wider impact in the international arena, as the alliance will come to determine the future world market for ethanol.

The start of the twenty-first century was marked by the emergence of an anti-globalization movement. Growing opposition to the WTO and corporate rule galvanized in the form of World Social Forum, a challenge to free trade ideology and neoliberal economics. Free trade, however, seems to now be resuscitating under the WTO, as biofuels and climate change arguments could finally overcome the Achilles heel of agricultural subsidies. Thus, the ethanol push in the Latin American region can have a wider impact globally.

Green Capital: Climate Change and Corporate Agroenergy Strategy

Instead of taking measures to fight the root causes of climate change, biofuels are helping create new political arrangements aimed at maximizing corporate profits and perpetuating global power imbalance. Thousands of hectares of traditional ecosystems, arable lands, and local livelihoods are being irreversibly affected by the expansion of bioenergy crops, as we in our urban industrialized lives and ever-increasing energy demands are buying into the “greening” of this new cycle of corporate takeover. It is essential to understand how corporate interests have come to determine the official discourse on climate change and biofuels and build resistance to it.

Deconstructing the Official Discourse

Touted as being essential in the fight against climate change, the wide promotion of biofuels appears to be a government-led clean energy policy for effective global environmental governance.

The growing debate on the environmental, social, and economic implications of climate change is in part a result of IPCC (Intergovernmental Panel on Climate Change) reports released in 2007. The

IPCC, working under the mandate of the United Nations, acknowledged climate change on a scientific basis; recognized its anthropogenic causes, namely the impact of man over nature; produced consensus forecasts on likely future scenarios on the most vulnerable regions; and, lastly, launched recommendations for immediate, medium, and long term measures that could mitigate and even reverse the ongoing crisis that threatens the planet. These reports recognize global warming as a consequence of industrial activities and the use of fossil fuels as the world's main energy source.

One of the IPCC's strongest recommendations is the immediate reduction of greenhouse gas emissions generated by the burning of fossil fuels, and highlights transportation as a key contributor. However, every production chain requires transport and even more so in a globalized economy. There is a corporate industry profiting exclusively from transporting and circulating goods around the world, especially agricultural products and edible commodities, resulting in high energy consumption.

A recent FAO report shows that industrial livestock production is a major threat to environment, responsible for 18 percent of greenhouse gas emissions, a share higher than what's caused by what is outlined as the transportation sector.³⁹ The impact of livestock production ranges from its devastating effect on ecosystems during the production of soy and corn for feed, to public health concerns caused by an unsustainable protein-based diet, to the dismantling of local food systems. Nonetheless, how the transportation sector has been framed is central to understanding the strategy we shall challenge.

European countries have taken the lead in setting targets for increasing the use of biofuels, so that they can rapidly meet their international commitments to reduce greenhouse gas emissions. These binding targets, which include 5.75 percent and 10 percent of biofuels in the EU's transportation matrix by 2010 and 2020 respectively,⁴⁰ are meant to pave the way to a transition to clean and renewable energy sources globally. Many countries are rapidly adopting legislation in compliance with a new global energy policy, in consideration of international negotiations on global environmental governance to address climate change in what will be a post-Kyoto protocol regime starting in 2012. This strategy depends on governments adopting mandatory blending targets through public policies that include both agriculture and energy—such as national biofuel plans—where the laws are being set to make the progressive mix compulsory, making biofuels into an international “energy security” strategy.

³⁹ It generates 65 percent of human-related nitrous oxide, which has 296 times the Global Warming Potential (GWP) of CO₂. Most of this comes from manure. Livestock now use 30 percent of the earth's entire land surface, mostly permanent pasture but also including 33 percent of the global arable land used to producing feed for livestock. The report is available online at: http://www.virtualcentre.org/en/library/key_pub/longshad/A0701E00.htm

⁴⁰ Directive 2003/30/CE European Parliament, on the promotion of the use of biofuels and other renewable fuels for transport. <http://europa.eu.int/scadplus/leg/en/lvb/l21046.htm>

However, neither the United States, the European Union, nor Japan, have the capacity to achieve their energy targets solely based on their agricultural land availability and crop production. If the US was to replace all its fuel with ethanol produced domestically, no land would be left for food production. This means that the mandatory targets to increase the use of biofuels in Northern developed countries will depend on production in Southern, mostly tropical, agricultural areas.

This emergence of an international market of agroenergy commodities, such as ethanol for fuel and the pressure to ensure supplies, is introducing new corporate actors who are investing heavily in production of agroenergy crops. Since the global adoption of biofuels depends on the governmental strategy to ensure “energy security,” national biofuel plans and targets are impacting the availability of agricultural land and water worldwide. Despite this impact on global food production and arable land and water, this agenda is moving ahead without public debate and participation.



Challenging the Root Causes of Climate Change

The setting of mandatory targets through legislation and creating a corresponding market does not tackle the interrelation between patterns of production and consumption, nor does it sufficiently encourage reduction in consumption patterns or foster efficiency.

Governments of the North, with their strong support for biofuels, are avoiding the political (and societal) burden of tackling the basic root causes of climate change, which would dramatically impact the lives and lifestyles of their citizens. Above all, governments are avoiding challenging corporations, the main beneficiaries from and daily providers of our mass consumption.

With the possibility of maintaining a low carbon basis, current patterns of consumption, and mobility of the middle class—termed a “non-negotiable lifestyle” by President George W. Bush—biofuels have been presented to the general public as an alternative to having to face the urgent need of drastically reducing consumption.

The ethanol alliance is an example of how new energy/climate change politics and cooperation on biofuels is really about maintaining US hegemony in the region and Brazil's aspirations, supported by its economic and political elites, to become a regional power and a partner of the United States. At the same time, biofuels are increasing the production of fuel from biomass and consolidating an entire new commodity chain of agroenergy⁴¹ products, which is bringing together the strongest corporate sectors: agribusiness and energy.

Profiteering from Global Warming

The threat of global warming was acknowledged by the Nobel Prize Committee through its recognition of Al Gore's personal crusade, which "has played a central role in building a global consensus for action on this issue and the world to focus on a common threat—climate change."⁴² This "consensus for action" was achieved in good measure through a strong media and communications strategy—an Oscar winning documentary which offers a rationale on "how we ended up here," as seen from a biased Northern, consumer-driven perspective and offers a consumers-only agenda to tackling climate change and halting destruction of the planet, while simultaneously guaranteeing continued corporate profits.

Market-led solutions, however, are inadequate and misleading, as they avoid the necessary structural changes in the industrial economy that the ecological crisis requires. The corporate logic has rapidly shaped a political discourse. Claiming a new era for business and the environment, "gambling on green" venture capital investments are looking to make a fortune (and save the world), betting billions on solutions to climate change.⁴³ To understand the essence of this new drive for profit and accumulation, Thomas L. Friedman, a free-market proponent has stated:

⁴¹ Accordingly to the *United Nations Food and Agriculture Organization* (FAO) terminology at its *International Bioenergy Platform* (IBEP), 2006, p.2: "**Bioenergy**: energy from biofuels. **Biofuel**: fuel produced directly or indirectly from biomass, such as fuelwood, charcoal, bioethanol, biodiesel, biogas (methane) or biohydrogen. **Biomass**: material of biological origin excluding material embedded in geological formations and transformed to fossil, such as energy crops, agricultural and forestry wastes and by-products, manure or microbial biomass. Bioenergy includes all wood energy and all agroenergy resources. **Wood energy** resources are: fuelwood, charcoal, forestry residues, black liquor and any other energy derived from trees. **Agroenergy** resources are energy crops, i.e. plants purposely grown for energy such as sugar cane, sugar beet, sweet sorghum, maize, palm oil, seed rape and other oilseeds, and various grasses. Other agro-energy resources are agricultural and livestock by-products such as straw, leaves, stalks, husks, shells, manure, droppings and other food and agricultural processing and slaughter by-products". <ftp://ftp.fao.org/docrep/fao/009/A0469E/A0469E00.pdf>

⁴² *Who will Succeed Al Gore?* Thomas L. Friedman, *New York Times*, October 14, 2007.

⁴³ Brian Walsh, "Special Report: Business and the Environment – Venture Capital Sees Profit in Going Green," *Time Magazine*, Vol 170, N.25, December 24, 2007.

“You can’t make a product greener without making it smarter and more in demand—whether it is a refrigerator or a microchip. Just ask G.E. or Wal-Mart or Sun Microsystems. You can’t make an army greener without making it more secure. Just ask the US Army officers who are desperate for distributed solar power, so they won’t have to depend on diesel fuel to power their bases in Iraq—fuel that has to be trucked all across that country, only to get blown up by insurgents. In pushing our companies to go green we are spurring them to take the lead in the next great global industry—clean power. In sum, Al Gore has been justly honoured for highlighting—like no one else—the climate challenge. But we still need a vision, a strategy, an army and a commander in the White House who can inspire young and old—not only to meet that challenge but to see in it the opportunity to make America a better, stronger and more productive nation. This is our crucible moment.”⁴⁴

It is urgent that we denounce this corporate strategy to challenge climate change. This crucible moment of “greening” corporations, or “de-carbonizing” the economy to “save the planet” only promotes free trade, now perhaps more strongly backed than ever before by national governments, and disguised as a commitment to tackle global warming and enforced as an “energy security” strategy. This is the real inconvenient truth of climate change: recycling old conservative and market-led discourse, as well as presenting options to boost green profits, carbon trade, and business as usual. Corporate profits are incompatible with any serious effort to halt climate change, just as they are incompatible with efforts to voluntarily and collectively reduce consumption.

A new global industry is emerging: clean energy. For example, venture capitalist Vinod Khosla, a founder of Sun Microsystems and one the most influential ethanol advocates in the United States, is the principal founding investor of Brenco (Brazilian Renewable Energy Company), the leading and largest fund of a fully integrated renewable fuels company. Brenco will own and lease land; plant, develop, and harvest sugarcane; construct and operate industrial mills of ethanol production with co-generation of electricity; and operate the large-scale industrial distribution of this fuel. It has initiated construction of one of Brazil's largest ethanol production platforms and is now building 10 mills, which will produce approximately 1 billion gallons (3.8 billion liters) of ethanol fuel using sugarcane as the primary raw material; its company fund has over US \$1 billion under management.⁴⁵

This clean energy is still going to feed the resource-intensive development model—from petrochemical industry, cosmetics, plastics goods, textiles, to construction, mattresses, packing, etc. A

⁴⁴ Thomas L. Friedman, “Who will Succeed Al Gore?” *New York Times*, October 14, 2007.

⁴⁵ www.brenco.com.br

continuous supply is needed to meet the industrial demand for energy destined for mass production, export, and circulation of commodities that are ever more disposable, and to feed the current pattern of world consumption.

This growing consumption of material goods, although enjoyed only by a minority of the world's population, is promoted as universally desirable, embodied in the hegemonic “American Way of Life” forged in a diet of fast food, to freedom equated with individual transportation. If global warming is a result of the industrial urban way of life and its ever-increasing demand for energy, industrializing the rural areas and deepening the oil-intensive agroindustrial model to produce biofuels can never be a solution.

Contradictions Within the Agroenergy Revolution

As concerns around biofuels grow, they have come to be criticized as being a medicine worse than the malady. Even the United Nations Rapporteur on the Right to Food,⁴⁶ Jean Ziegler, asked for a global moratorium of five years until further research guarantees the effectiveness of biofuels in reducing emissions and explores its potential threat to food supply.⁴⁷

With the Green Revolution, we saw how corporate strategy, mediated by governments, changed world food production and dramatically impacted livelihoods and ecosystems. This oil-intensive and agrochemical-dependant agriculture has been environmentally disruptive, and dismantled local organic food production and traditional knowledge systems, irreversibly transforming peasant and indigenous livelihoods. The agroenergy revolution is likely to worsen the ecological and social impacts of industrial agriculture. Its contradictions can be summed up in the following:

If global warming is a result of the industrial urban way of life and its ever-increasing demand for energy, industrializing the rural areas and deepening the oil-intensive agroindustrial model to produce biofuels can never be a solution.

⁴⁶ Provisional report to the 62nd General Assembly, doc. A/62/289, general distribution on August 22, 2007.

⁴⁷ International NGOs with solid records on environmental global issues, agriculture and trade negotiations, biosafety, human rights, corporate accountability, etc. have launched reports, position papers and statements criticizing the rush to promote agroenergy demanding ‘feed people not cars.’ They are also questioning the heavy oil dependence of industrial agriculture used to produce and transport biofuels; use of fertile land to produce fuel for cars and not food for people. Nearly 40 percent increase in tortilla prices in México in January 2007, showed how biofuels can impact food prices resulting in social unrest and political consequences.

- *Biofuels can actually aggravate climate change:* The idea that biofuels would be “carbon neutral,” in terms of equating greenhouse gas reduction or that they can be used to sequester carbon as a CDM (Clean Development Mechanism), to meet the goals of the Kyoto Protocol, is the main justification behind biofuel targets for vehicle content, as argued in the case of the EU. However, this logic does not hold when one considers that biofuels production is dependent on oil-based industrial agriculture,⁴⁸ and they are causing increases in deforestation and disrupting land use, all of which contribute to green house gas emissions.
- *Biofuels do not change, but rather perpetuate, the inequalities of oil civilization:* Given the current geopolitics of oil—the backbone of economic and military power imbalance in today’s world—adopting biofuels as a short-term solution ensures that the market will remain in situ long enough for oil companies to recoup the investments they have made and to strengthen alliances with agro-biotech companies.⁴⁹ Oil companies are presently working on new oil sources found in locations that are increasingly more expensive to tap, such as the environmentally fragile Artic Sea. Therefore, interest in biofuels can be viewed as a way for oil corporations to continue to control the basic energy supply and to deny a democratic debate on transition measures.
- *Biofuels are a threat to food sovereignty:* Social movements and civil society organizations around the world have warned against agroenergy and its impact on food sovereignty.

Global grassroots movements, especially those from the South, had their voices heard at the World Forum on Food Sovereignty, Nyeleni, 2007, held in Mali, Africa.⁵⁰ More than 600 participants from all over the world came together at the forum to celebrate the 10th anniversary of the struggle for people’s right to produce their food and feed themselves. Social movements and civil society, including peasants, environmental groups, consumers networks, and so on., agreed that corporate-driven, industrial monocrop-based “biofuels” should be named “agrofuels” instead. They advocate that “bio” meaning “life” does not accurately portray the issue, and that the term agrofuels more clearly states the connection with the agribusiness sector.

⁴⁸ For an extensively developed argument on how climate change and ‘peak oil’ are fatal threats to globalized industrial agriculture that should be challenged by a new paradigm of production and consumption based on small-scale local farming, see Debi Barker, *The Rise and Predictable Fall of Globalized Industrial Agriculture*, International Forum on Globalization, 2007.

⁴⁹ For example, the case of BP and Dupont co-developing the Biobutanol, a biofuel which could be transported by existing pipelines.

⁵⁰ www.nyeleni2007.org

Agroenergy corporate products, with their claim to meet the ever-growing unsustainable demand for energy, compete with food crops for arable land and water, depriving the common valuable resources, putting our food production at risk and threatening livelihoods and ecosystems. Groups from the South are declaring that agrofuels are a new front for industrial agriculture to further strengthen the dominance and control of international corporations over agricultural production and international prices for agricultural products—which will particularly impact poor developing countries who have to compete against the highly subsidized agriculture in the North.

Recommendation: Energy and Food Sovereignty—a Positive Agenda for “Cooling Down the Earth”

To tackle ecological crisis and social inequalities and to address the root causes of global warming and fossil fuels depletion, social movements in the South are building the concept of Energy Sovereignty. Peasant and small-scale agriculture organizations around the world are presenting a non-urban perspective on how to address the structural change of our energy consumption and challenge corporate control while proposing a shift that could really make a difference for the planet. Linked to its counterpart, Food Sovereignty, the goal is to explain the interdependence of food and energy production, the main political issue confronting us today.

The Path Toward Change

With millions of members worldwide, the world’s largest peasant and farm workers movement, Via Campesina is a leading voice for indigenous peoples and farm communities. Peasants’ understanding of production methods (both traditional and industrial agriculture models) coupled with their historical role as stewards of the land, ensures their expertise on the micro and macro changes climate change has wrought worldwide. Via Campesina’s recent position paper outlines how industrial agriculture is helping to fuel climate change:

“Corporate food production and consumption are significantly contributing to global warming and to the destruction of rural communities. Intercontinental food transport, intensive monoculture production, land and forest destruction, and the use of chemical inputs in agriculture are transforming agriculture into an energy consumer and are contributing to climate change. Under neo-liberal policies imposed by the World Trade Organization, the regional and bilateral Free Trade Agreements, as well as the World Bank and the International Monetary Fund, food is produced with oil-based pesticides and fertilizers and transported all around the world for transformation and consumption.”

Therefore, we, the small farmers and peasants from around the world demand:

- “1. The complete dismantling of agribusiness companies: they are stealing the land of small producers, producing junk food, and creating environmental disasters.
2. The replacement of industrialized agriculture and animal production by small-scale sustainable agriculture supported by genuine agrarian reform programs.
3. The banning of all forms of genetic use restriction technologies (GURTS).
4. The promotion of sane and sustainable energy policies. That includes consuming less energy and decentralized energy instead of heavily promoting agrofuel production as is currently the case.
5. The implementation of agricultural and trade policies at local, national and international levels supporting sustainable agriculture and local food consumption. This includes the ban on the kinds of subsidies that lead to the dumping of cheap food on markets”.⁵¹

As the social movements are demanding, it is urgent that a new paradigm for food production be adopted to replace the industrialized and oil-intensive agrofood system, a key contributor to global warming. To move this agenda forward, it is essential to forge a new discourse on food and energy sovereignty.

Energy and Food Sovereignty: Addressing Root Causes, From the Ground Up

“Sovereignty” versus “security” expresses opposing strategies and radically different views on peoples’ self-determination over natural resources. For that reason social movements in the South have acknowledged the need for a progressive framework to articulate their position.

The current drive for “energy security,” as outlined here with the geopolitics of ethanol in the region and the corporate agroenergy strategy worldwide, is not designed to alter the status quo. The capacity to mix fossil fuels and agrofuels will prevent a rapid phase-out of oil-based infrastructure and economy, further postponing the required structural changes in the way of life—and patterns of consumption—in the developed world.

Agroenergy as an “energy security” strategy omits the reliance of current food production on an industrialized system, dependent entirely on oil-intensive inputs (from nitrogen compounds, fertilizers, agrochemicals, to mechanization of the entire production chain: worldwide transportation, processing, storage, freezing, and logistics for distribution). In the future, oil depletion and high prices

⁵¹ *Small Scale Sustainable Farmers are Cooling Down the Earth*, Position Paper of Via Campesina International on Climate Change. 9 November, 2007, www.viacampesina.org.

will have a systemic negative impact on the global food supply, making affordability a key issue for the large part of humanity.

The industrial agriculture model that began with the Green Revolution is petro-dependant in energy and inputs. The end of the fossil fuel era thus sounds the death knoll of industrial agriculture.⁵²

A new world order will require fundamental changes, where food and energy sovereignty would be essential components and serve as guiding principles to attain social and environmental justice. An expression of peoples' right to self-determination, they stem from the right to democratic access and effective control over common natural resources, thereby guaranteeing communities and nations the ability to freely pursue their economic, social, and cultural development, and to determine their political status.

A new world order will require fundamental changes, where food and energy sovereignty would be essential components and serve as guiding principles to attain social and environmental justice.

In exercising such rights, people are truly empowered in a sovereign way to make sound environmental choices that affect their daily lives while being responsible toward the planet, instead of their choices being an exclusive matter of government's energy security, and often undemocratic policies, as outlined here.

However, a stronger framework for peoples' rights over the commons, which governments and states should acknowledge, requires broader participation from the civil society through energy literacy and empowerment.

Energy Literacy: Changing Paradigms

Energy literacy is the first step of transformative thinking based on a new ecological-economic paradigm: if fighting global warming in a sound way requires citizens to take radical transformative action, it also demands new skills to think through the culture of consumerism that has colonized our minds.

To make another world possible, our relationship to and knowledge of the energy fabric, or what the world that surrounds us is made of, is the first step. An awareness of energy flows should get us to think out of our daily consumption habits—from the corporate agriculture chain behind a hamburger to the cellulose polluting plant behind disposable cardboard packaging material. A strategy

⁵² See the *Geopolitics of Agrofuels*, Position paper of the first international meeting of southern organizations to discuss agroenergy. Quito, Ecuador, June 2007. www.accionecologica.org.

for turning this transformative ecological thinking into political action is being proposed by social movements in the South.

Brazil: Building Energy and Food Sovereignty

At the first National Popular Conference on Agroenergy,⁵³ held in October 2007 in Curitiba, Brazil, more than 500 delegates agreed that agrofuels, promoted in a concerted effort by the government and both national and transnational corporate interests, **are not** a solution to the ecological crisis, as they further entrench the negative social and environmental consequences of industrial agriculture, especially with the expansion over threatened biomass of the Cerrado (grasslands) and the Amazon region.

National grassroots constituencies raised their voices against the current trend of biofuels since they have a deeper analysis of the ecological crisis related to climate change. “We are at a crossroads—either we change the current paradigm or humanity and life on this planet will be destroyed.”⁵⁴

The final declaration that came out of the conference recognized agrofuels to be a new front to further agribusiness profits while dramatically altering the fabric of rural society with the massive expansion of monocultures such as sugarcane, soy, palm, energetic forests, eucalyptus, and jathropa plantations for fuel production. Social movements, re-affirming the decade-long struggle to ensure food sovereignty for all, are therefore promoting diverse renewable energy alternatives derived from biomass, solar, wind, and so on. The concept of energy sovereignty emphasizes that energy production and consumption should be integral and indivisible from peoples right to define their own agricultural policies to feed themselves.

The participants agreed that any progressive “substitutes” to oil, especially agrofuels used for transportation, are acceptable only if accompanied by a radical transformation of current industrial patterns of production and consumption. And that this should be driven by governments, instead of corporations, so each country would find ways to achieve energy sovereignty—producing sustainable energy to meet its national needs, instead of the current situation where Southern countries have increased energy production for export markets.

⁵³The Agroenergy Conference was able to galvanize an unified common position from a broad range of actors: Via Campesina Brazil (conformed by seven social movements, including: Rural Youth Pastoral (PJR), Pastoral Land Commission (CPT), the Federation of Agronomy University Students (FEAB), and the peasant movements: Landless People’s Movement (MST), Small Producers Movement, (MPA) Peasant Women Movement (MMC) and Dam Affected People’s Movement (MAB) and Missionary Indigenist Council (CIMI); Central Workers Union (CUT), REBRIP, FBOMS, Terra de Direitos, Friends of the Earth – Brazil, FASE, IEEP, REPAS, Cooperbio, Ecosocialist Network, Fetrasp, Feraesp, SindPetro, Dhesca Brasil. Also there was support of individuals such as the as world renowned liberation theologian, Leonardo Boff.

⁵⁴ Introduction of For Food and Energy Sovereignty – Grassroots Movements, Social Organizations, and Pastorals’ Position on Agroenergy in Brazil.

The Conference Declaration clearly states that civil society and social movements in the country **do not** agree with the agroenergy policy “as currently promoted by the government, to be exported with the objective of supplying the rich countries of the North and generate profits for agribusiness, and national and transnational companies.”⁵⁵

The social movements also demanded that under no means should agroenergy be used to legitimize, now or in the future, military control and submission of other peoples and territories.

The terms of the Brazilian Declaration are in no way a recipe to ensure Energy Sovereignty, since it is still under construction and depends on the daily struggles on the ground. However, it does help to make it obvious to the world that the Brazilian social movements are critical of biofuels and are proposing alternatives to it.

As global warming grows as an undeniable threat over every life form, it poses a challenge to our basic assumptions, old political discourse, and outdated concepts, all of which fail to address the root causes of climate change. The ecological crisis brought on by industrial society and its energy demands cries for a paradigm shift in our production and consumption patterns and in the way we depend on nature to provide our basic needs and ensure daily survival: air to breathe, water to drink, fertile land to grow food, fibers, and wood, and biodiversity—to guarantee that all diverse and unique life forms on this planet have the right to simply exist.

⁵⁵ For Food and Energy Sovereignty, point 5.

Appendix: For Food and Energy Sovereignty

1st National and Popular Conference on Agroenergy

In Defence of Food and Energy Sovereignty

Curitiba, Paraná, Brazil | October 31, 2007

Grassroots movements, social organizations, and pastoralists' position on Agroenergy in Brazil⁵⁶

There is no doubt that planet Earth is seriously ill due to the destructive action of Capital, the great responsible for environmental devastation, global warming and climate changes, and the privatization of every life form. We confront a crossroad: either we change the current civilization paradigm or humanity and life in this planet will be destroyed.

Our struggle is for a new civilization based on a harmonic relationship among humanity and nature. A civilization in which does not prevail consumism and the logic of profit and market, that concentrates wealth and power in few hands and generates poverty and social inequality. We struggle for a society based on social and environmental justice, on equality, on the solidarity among peoples, and built on ethical values coherent with the sustainability of every life form.

In the face of this we take position:

We defend that land, water, sun, air, underground and biodiversity are conserved and used in a sustainable way to primarily produce food and provide jobs and life quality.

We affirm the principle of popular sovereignty over territory and its destiny. Food and energy sovereignty is people's right to produce and control food and energy to take care of its needs.

Energy production cannot, under any circumstance, substitute or risk food production. Agroenergy should only be produced in a diversified way and in complement to food production.

Agroenergy production policies cannot continue to be determined by market logic, and by the interests of oil companies, car industry and agribusiness. We fight against the control of foreign capital over the economy, lands, natural resources and energy sources of Brazil.

Agroenergy must be produced to guarantee people's energy sovereignty and not, as currently promoted by the government, to be exported with the objective of supplying the rich countries of the north and generate profits to agribusiness, and national and transnational companies.

⁵⁶ The Agroenergy Conference, held from 28-31 October 2007, was able to galvanize an unified common position (first time) from a broad coalition of actors: Via Campesina Brazil (conformed by seven social movements, including: Rural Youth Pastoral (PJR), Pastoral Land Commission (CPT), the Federation of Agronomy University Students (FEAB), and the peasant movements: Landless People's Movement (MST), Small Producers Movement, (MPA) Peasant Women Movement (MMC), Dam Affected People's Movement (MAB) and Missionary Indigenist Council (CIMI); Central Workers Union (CUT), REBRIP, FBOMS, Terra de Direitos, Friends of the Earth – Brazil, FASE, IEEP, REPAS, Cooperbio, Ecosocialist Network, Fetrasp, Feraesp, SindPetro, Dhesca Brasil. Also there was support of individual personalities, as world known liberation theologian, Leonardo Boff.

The current model of agroenergy production is pushing the expansion of agriculturist frontiers, menacing Brazilian biomes, mainly of the Amazonia and Cerrado. We demand the end of deforestation and of the expulsion of farmers in every Brazilian ecosystem. We affirm the sovereignty of traditional peoples and communities over their territories.

Food and energy sovereignty must be based on agroecology, and on an economy that simultaneously expresses and integrates nationally, in a democratic way, local and regional economies with their needs and characteristics. We fight the unsustainable and excluding model of agribusiness, one of the main causes of climate changes due to the transformation on the use of land, deforestation, and the massive use of agrotoxics and transgenics, and the mechanization and the transport of commodities on a global scale.

We reject and fight every kind of monoculture, and propose to limit the size of rural properties, and a limit to the areas destined to agroenergy production in every establishment, municipality and region.

We reaffirm the need for a popular agrarian reform, for the recognition of the territories of traditional peoples and communities, and for a process of democratization of land as the way to guarantee food and energy sovereignty. The current agribusiness model is a process of continuous land concentration.

We struggle for a sustainable and diversified energetic model. Agroenergy is only one of the alternatives that should come in hand with efficiency measures and other renewable and sustainable energy sources.

We defend a popular and decentralized energetic model that expresses local and regional social needs, characteristics and potentials. We propose the production and management in the form of small cooperative, communitarian or family energetic units, controlled by peasants, traditional communities and workers.

The role of peasants and family agriculture must be defined by their sovereignty and autonomy. Therefore, we are against the integration system that ties farmers to agroenergy companies, that only exploits their labour. We defend public policies that guarantee credit, technical assistance and conditions for peasants to produce agroenergy in small units.

We struggle for a new transport system that integrates different forms (fluvial, railway, terrestrial) and privileges public and collective transport, contrary to the unsustainable and irrational model that is oil dependant and privileges individual transport.

We demand that the Brazilian State stimulates, regulates, and controls an energy sovereignty policy in our country. For that, there is a need for public instruments, policies and institutions with social control, that guarantee the effective role of the State in the process of production and commercialization of agroenergy in Brazil.

We, the 500 participants of the 1st National and Popular Conference on Agroenergy in Brazil, sign this letter representing the movements of Via Campesina, environmentalists, worker's unions and pastorals.

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