

← AGAINST THE GRAIN

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LAND GRABBING FOR BIOFUELS MUST STOP: EU biofuel policies are displacing communities and starving the planet



Aerial photo of the lands taken by Addax Bioenergy for its sugar cane plantation in Sierra Leone. (Photo: Le Temps)

Zainab Kamara is one of several thousand farmers in Sierra Leone whose lands have been taken over by the Swiss company Addax Bioenergy for a 10,000 hectare sugar cane plantation to produce ethanol for export to Europe.

“Now I don’t have a farm. Starvation is killing people. We have to buy rice to survive because we don’t grow our own now,” she says.¹

In neighbouring Guinea, peasants are trying to understand how their government could have possibly signed off 700,000 ha of their lands to an Italian company to grow jatropha for biodiesel.²

On another continent, Guarani communities in Brazil are locked in battles of survival against companies that want their lands to produce ethanol from sugar cane.³ It’s a similar story in Indonesia where the Malind and other indigenous peoples of West Papua are desperately fighting a massive project to convert their lands into sugar cane and palm oil plantations, and in Colombia, where Afro-Colombian communities are being pressured by paramilitaries to leave their lands to make way for oil palm plantations.⁴

Predictions are that global demand for biofuels will hit 172 billion litres by 2020, up from 81 billion litres in 2008.⁵ At current production levels, that would mean an additional 40 million hectares of land would have to be converted to growing crops for biofuel.⁶ Put another way,

1. Interview with Joan Baxter at the Farmers’ Conference organized by Green Scenery and the Sierra Leone Right to Food Network, Freetown, April 2012.

2. Tommaso Ebhardt & Lauren van der Westhuizen, “Italian Investor’s Biofuel Project Sparks Kenyan Opposition,” Bloomberg, 4 August 2010: <http://www.bloomberg.com/news/2010-08-04/italian-biofuels-project-arouses-opposition-from-kenyan-environmentalists.html>

3. Survival international, “US food giant Bunge accused over biofuel ‘tainted with Indian blood’,” 14 November 2012: <http://farmlandgrab.org/post/view/21314>

4. Down To Earth Indonesia, “The Land of Papua: A continuing struggle for land and livelihoods,” 16 November 2011: <http://farmlandgrab.org/post/view/19725>.

Jane Monahan, “Afro-Colombians fight biodiesel producers,” BBC, 21 December 2008: <http://news.bbc.co.uk/2/hi/business/7784117.stm>

5. OECD: <http://stats.oecd.org/viewhtml.aspx?QueryId=36348&vh=0000&vf=0&l&i=blank&lang=en>

6. According to UNEP, 35.7 million ha were used for biofuel production in 2008. UNEP predicts a somewhat higher figure of 80 million ha by 2020, an increase of 44.3 million ha over 2008, and some studies go as

it would require 1096 land grabs the size of the Addax Bioenergy project in Sierra Leone.⁷

(Table 1 provides a listing of 293 reported land grabs around the world between 2002 and 2012 – covering over 17 million hectares – where the stated intention of the investors is the production of biofuels.)

Europe is the central driver of land grabs for biofuels because it imports much of the raw materials it uses. Europe is also where the biggest increase in demand is expected to come from over the next decade.

The EU-27 mandate, a new proposal by the European Commission, sets a 2020 target for consumption of biofuels equivalent to more than 40 Mtoe (million tonnes oil equivalent). The supply of raw materials to produce this is being built by massively displacing people in the Global South and grabbing their lands.

European companies and governments have tried to counter criticism by proposing various criteria for “sustainable biofuels”. Most recently, in October 2012, the European Commission (EC) published a proposal to limit the contribution food crops can make towards the EC’s target for renewable energy in transportation. Under the new proposal, states can only count biofuels derived from food crops for half of the total target of 10 percent; the rest of the biofuel contribution has to come from non-food sources.

But the campaigns, negotiations and criticism have done little to staunch the continent’s growing consumption of biofuels. The EU has made only symbolic gestures to add a green veneer to the brutal global land grab that has resulted.

Europe is still grabbing land for biofuels

In the world of biofuels, there are three markets that matter: the US, the EU and Brazil. Together they account for 80 percent of global biofuel consumption, and this is not predicted to change anytime soon.⁸ (see Box 1)

Of the three, the EU is the only one that relies heavily on imports, both for feedstock (the crops used for biofuel

high as 116 million ha by 2020, and even 1,668 million ha by 2050. See UNEP, “Towards sustainable production and use of resources: Assessing biofuels,” 2009: www.unep.org/PDF/Assessing_Biofuels.pdf

7. The Addax project intends to produce 83 million litres of ethanol for export per year on 10,000 ha of land.

8. OECD, Agriculture Outlook 2011-2020: <http://www.oecd.org/site/oecd-faoagriculturaloutlook/biofuels-oecd-faoagriculturaloutlook2011-2020.htm>



A cut sugar cane field near Cuyotenango, Guatemala. One large sugar producer that once exported only food products now uses 13 percent of its production for fuel. (Photo: Richard Perry/The New York Times)

production) and for food to replace European crops diverted to biofuel production. In 2008, the EU imported around 41 percent of its biofuel feedstock needs.⁹

The latest EC proposal calls for biofuels based on food crops to account for five percent of its transport fuel consumption by 2020.¹⁰ Given the overall increase in transportation fuels that is expected within Europe, this will work out to 21 Mtoe (million tonnes oil equivalent) of biofuels, most of which will be biodiesel made from oilseed crops or palm oil.¹¹ The oilseed crops used to make biodiesel in the EU produce between 0.8 to 1.2 toe biodiesel/ha. Taking 1 toe/ha as an average, this would mean that the EU would have to devote 21 million hectares to biofuel production to meet its 2020 demand at current yield levels. That's nearly double the total area planted to oilseeds in the EU in 2012 – more than the entire area of arable land in Italy and Spain combined.

No doubt the EU will have to source an increasing share of its biofuel crops from elsewhere to reach its targets.

Plantations, plantations, plantations

Cheap palm oil is the obvious substitute. Oil palm plantations in the tropics yield four times more biodiesel per hectare than European oilseed crops, and it would be possible to meet the EU's entire 2020 demand for food crop-based biofuel from 5.5 million ha of oil palm plantations.

Establishing these plantations, however, is no small undertaking. Malaysia's Sime Darby, the world's largest palm oil producer, has spent decades increasing the size of its plantations under production to nearly 500,000 ha. Importing palm oil to supply the EU's 2020 five percent target for food crop-based biofuels would be akin to creating

9. Calculations are based on data provided in Oxfam, *Hunger Grains*: <http://www.oxfam.org/en/grow/policy/hunger-grains>

10. It could be higher than 5%. The EC proposal is only for what member countries can count towards the 10% target. It doesn't establish a ceiling for biofuel production or consumption from food crops.

11. Final Energy Demand EU-25, Mtoe: Transport: 1990- 273.6; 2000- 333.1; 2010- 388.6; 2020- 428.5; 2030- 449.8 (Source PRIMES, ACE).

Beyond the big three

There are currently biofuel mandates in at least 27 countries outside of the EU, Brazil and the US (see Table 2. Mandates for biofuels around the world). If these mandates were realised, Biofuels Digest says the global biofuel market would balloon to 227 billion litres by 2020 — a significant climb from the OECD's prediction of 172 billion litres.

The mandates were a political response to a mixture of high oil prices, cash from foreign investors, and delusional hopes for crops like jatropha. But the political and economic rationale for the promotion of biofuels, which was always weak, has eroded further, and, for most governments in the South, policies to encourage domestic consumption of biofuels remain only on paper, with things not likely to change anytime soon. The Thai Minister of Foreign Affairs bluntly told his Gulf State counterparts that his country, one of the big emerging biofuel producers, would abandon biofuels if its oil exporting partners would “help to ensure the stability and affordability of energy prices.”¹

There is, however, a second tier of significant biofuel producers, whose national production exceeds or is predicted to reach one billion litres per year. They are: Argentina, Canada, China, Colombia, India, Indonesia, Malaysia, Philippines, and Thailand, and together they account for 18 percent of the global market for biofuels.

Some of these countries, especially Argentina, Indonesia and Malaysia, produce for both domestic and export markets, but their capacity for biofuel exports, as opposed to exports of biofuel crops, will remain limited because the policies of the big markets (EU, US, and Brazil) favour domestic production — and control over both domestic and imported supply by multinationals (see Box 3).

The big potential markets of China and India are limited by food security concerns. China has banned the further construction of ethanol plants that use grains and is exploring production of non-grain crops on marginal lands, with little success so far. India too is not touching its grain supply. Domestic ethanol targets focus on sugar cane, while biodiesel targets focus on jatropha, both of which have failed dramatically to produce much supply. In this context, companies from the two countries have been encouraged to look overseas at opportunities for biofuel production.

One of the main Chinese companies involved in the development of biofuel production overseas is the China National Complete Import and Export Corporation Group (COMPLANT). It functioned as a foreign-aid office for China until 1993, and while it now trades on the Shenzhen Stock Exchange, its controlling shareholder is the State Development & Investment Corporation, the largest state-owned investment holding company in China.

In 2010, COMPLANT subsidiary Hua Lien International announced plans to establish a joint venture with COMPLANT and the US\$5-billion China-Africa Development Fund to set up ethanol projects in various African countries. The three companies plan to launch the venture in Benin and roll out to other countries in the coming years. The venture will draw on COMPLANT's numerous recent investments in sugar cane and cassava production, including an 18,000-ha sugar cane plantation in Jamaica, a proposed 4,800 ha sugar cane and cassava venture in Benin, a 1,320-ha sugar cane plantation and factory in Sierra Leone, where in 2006 it also announced plans to expand its holdings to 8,100 ha to begin production of cassava, and a massive 500,000 million tonne per year sugar and ethanol joint venture with Kenana Sugar in Sudan along the White Nile. In Madagascar, COMPLANT has been running the SUCOMA sugar factory since 1997 and, in 2008, under a twenty-year management contract, it took over the state-owned sugar refinery SUCOCOMA, giving it control over 10,000 ha for sugar cane production. COMPLANT and the China Development Bank are also involved in the construction of a controversial large-scale sugar refinery and plantation in the northeastern Afar region of Ethiopia.

1. Statement of ACD Coordinator by His Excellency Mr. Surapong Tovichakchaikul, Minister of Foreign Affairs of the Kingdom of Thailand, at the Asia Cooperation Dialogue Ministerial Meeting, Kuwait City, 14 October 2012: <http://www.mfa.go.th/main/en/media-center/14/28431-Statement-of-ACD-Coordinator-by-H.E.Mr.-Surapong-T.html>

a dozen new companies the size of Sime Darby.¹²

Oil palms only grow in tropical areas near the equator, greatly limiting where expansion can take place.¹³ Indonesia continues to be a main area of expansion, with two thirds of new plantations being carved out of rain forests.

A more recent target for expansion is in the forests and agricultural lands of West and Central Africa. Sime Darby is pursuing the development of plantations on a massive 220,000 ha concession in Liberia that will displace thousands of people from their lands and water sources. Fifteen thousand people were affected by just the initial clearing of 10,000 ha,¹⁴ and local communities are now vowing to stop the company from entering their lands.¹⁵

In the jungles of Gabon, Singapore-based Olam plans to spend US\$236 million clearing 50,000 ha of forest for an oil palm plantation within a 300,000 ha concession that it was provided by the government.¹⁶

Europe's 2020 five percent mandate for food crop-based biofuels would generate enough demand to support the construction of at least 100 oil palm plantations the size of the Olam project.

Soybeans are the other major crop imported into the EU for biofuels. Most of any added production for 2020 would likely come from Argentina and other countries in the Southern Cone of Latin America. But soybeans are not nearly as productive as oil palm, producing only 0.31 toe/ha of biodiesel.¹⁷ To satisfy the EU's 2020 five percent



Jatropha has not lived up to its exaggerated promise. (Photo: CIFOR)

target for food crop-based biofuels from soybeans alone would require the planting of nearly 70 million ha in Latin America. And Brazil has a 2014 biodiesel mandate of its own, which would require 10 million hectares of soybean production.¹⁸ To put this in perspective, Brazil and Argentina currently have a total of around 45 million hectares planted with soybeans.

Then there's the question of the other five percent. The EC's new rules state that this must come from non-food crops.¹⁹ Most of these non-food crop options, however, are still a long way from large-scale commercial production and are unlikely to be ready by 2020 (See Box 2). One of the few economically viable options that could meet the supply needs of the EC directive is jatropha.

Jatropha's new life

Jatropha went through an investment boom in the mid-2000s. It was portrayed as a miracle crop that could be grown on marginal lands with few inputs to produce plenty of oil for biofuels. Many companies and government programmes were launched, but the reality soon

12. Sime Darby had 472,156 ha of mature oil palm plantations under production. See: http://www.sime-darby.com/Operational_Statistics.aspx

13. UNEP, "Oil Palm Plantations," 2011: www.unep.org/pdf/Dec_11_Palm_Plantations.pdf

14. Basta Mag & Amis de la Terre, "Live or drive, a choice has to be made: A case study of Sime Darby operations in Liberia," December 2012: http://www.bastamag.net/IMG/pdf/Report_Oil_Palm_Liberia_FOE_and_Basta.pdf

15. <http://farmlandgrab.org/post/view/21381>

16. Olam's submission of Summary Report and Planning to the RSPO: <http://www.rspo.org/v2/file/Summary%20Report%20of%20Planning%20and%20Management%20Olam%20NPP.pdf>

17. Data is from Brazil. See: David M. Lapola et al.,

"Indirect land-use changes can overcome carbon savings from biofuels in Brazil," PNAS, January 2010: <http://www.pnas.org/content/107/8/3388.full>

18. David M. Lapola et al., "Indirect land-use changes can overcome carbon savings from biofuels in Brazil," PNAS, January 2010: <http://www.pnas.org/content/107/8/3388.full>

19. Member states can't count biofuels or liquids made from "cereal and other starch-rich crops, sugars and oil crops" towards more than 5% of the targets.

No alternative to first-generation biofuels in sight

Biofuels were expected to help reduce greenhouse gas (GHG) emissions from transportation, and this justification is built into many of the mandates. But, so far, this isn't happening. The GHG savings derived from the first generation of biofuels disappear when the indirect land use changes that occur from the production of the biofuel crops are factored in.¹

Hopes that biofuels will make a significant contribution to reducing GHG emissions now rest in the development of second or third generation biofuels that will be more carbon neutral and not compete with food crops for land. Both the EU and the US have various incentives and subsidies built into their biofuels policies and mandates that are supposed to stimulate the development of these advanced biofuels.

Cellulosic ethanol made from feedstocks like grasses, wood chips or straw was supposed to be the first advanced biofuel on stream by now. But companies have failed to find an efficient and affordable way to break down the cellulosic material for large-scale production. As a result, the US Environmental Protection Agency has had to repeatedly waive its mandate for the use of cellulosic ethanol, which was 500 million gallons in 2012 and will be 1 billion gallons in 2013, because of a lack of supply. In a likely sign of things to come, British Petroleum cancelled its plans to construct the world's largest cellulosic ethanol plant in October 2012.² US companies are instead turning to imports of sugar cane ethanol from Brazil, since it qualifies as "advanced biofuel" under US regulations.

At this point, the only success in producing advanced biofuels on a commercial scale is with a technique known as lipids hydroprocessing that produces diesel and jet fuels. But the factories using this technique depend on animal fats, which would present major supply constraints if there was a further scaling up, and palm oil, which does little to resolve first generation issues. Several large facilities for producing biobutanol, another "advanced biofuel", are set to come on stream, but these too depend on first generation biofuel crops, such as grains.³ Other alternatives, such as micro algae, are still far too untested and expensive to be ready for mass commercial production before 2020.⁴

For the foreseeable future, the big biofuel markets will continue to be supplied with first generation biofuels, offering little if any GHG emissions reductions and generating all kinds of problems for the food supply and rural communities.

1. UNEP, "Towards sustainable production and use of resources: Assessing biofuels," 2009: www.unep.org/PDF/Assessing_Biofuels.pdf

2. Kevin Bullis, "BP Plant Cancellation Darkens Cellulosic Ethanol's Future," MIT Technology Review, 2 November 2012: <http://www.technologyreview.com/news/506666/bp-plant-cancellation-darkens-cellulosic-ethanols-future/>

3. Tristan Brown, "Summer 2012 State Of The Advanced Biofuels Industry: Hydrocarbons Lead The Way," Seeking Alpha, 13 August 2012: <http://seekingalpha.com/article/803911-summer-2012-state-of-the-advanced-biofuels-industry-hydrocarbons-lead-the-way>

4. IEA Bioenergy Task 40 Sustainable International Bioenergy Trade, "The potential role of biofuels in commercial air transport- biojet-fuel," September 2012: www.bioenergytrade.org

sunk in. It turned out the crop was like any other commodity crop – high yields, at least high enough to make the big projects economical, required lots of water, decent soils and the use of plenty of fertilisers.²⁰

By December 2012, there were over 130 land grabs for jatropha production registered around the world, adding up to over nine million hectares (see Table 3. Landgrabs for Jatropha, 2002–2012).

20. NPR, "How A Biofuel Dream Called Jatropha Came Crashing Down," 21 August 2012: <http://m.npr.org/news/Science/159391553>

Many of these projects seemed unlikely to ever get off the ground. But the EC's new proposal could change that by establishing a massive new market for biofuel from non-food crops, meaning jatropha would not have to compete against more productive alternatives such as oil palm.

How much land would be required to satisfy the half of the EU's 2020 mandate set aside for non-food crops? It's hard to give a precise figure, because yields for jatropha vary widely according to growing conditions. But if we use the data from Brazil, where jatropha is grown on managed plantations and the yields are relatively high (at



Man transporting oil palm kernels on an Indonesian plantation. (Photo: CIFOR)

1.01 biodiesel toe/ha), 21 million hectares would be required.²¹ This figure could easily double if production targeted less fertile lands, as the crop's promoters promise they will.

The wave of land grabs for jatropha over the past six or so years has been obscene, especially in Africa: 235,000 ha in Ghana, 700,000 ha in Guinea, 550,000 ha in Kenya, and the list goes on (see Table 3). The EC proposals could easily set the stage for a second wave of land grabs of equal size, with greater impacts on the ground as the new projects are more likely to move into the production phase.

And people stand to lose more than just their land in the process. Jatropha needs plenty of water to produce decent yields. The available studies say the crop needs anywhere between 3,213 litres of water to 778,025 litres of water to produce one litre of biodiesel. In comparison, producing a kilo of wheat requires about 1,000 litres of water.²²

For the communities that lose their lands and access to water because of land grabs for biofuels, it does not matter whether those lands are planted with food crops like soybeans or non-food crops like jatropha.

No room for “sustainable” biofuels

In the face of growing criticism of biofuels, the EC and European biofuel companies are making a show of regulating the market and dressing up biofuels as “sustainable”. Under the EC Directive, biofuels must comply with sustainability criteria approved by the EC in order to count towards mandatory national renewable energy targets or to receive government support.

21. David M. Lapola et al., “Indirect land-use changes can overcome carbon savings from biofuels in Brazil,” PNAS, January 2010: <http://www.pnas.org/content/107/8/3388.full>

22. IEA Bioenergy Task 40 Sustainable International Bioenergy Trade, “The potential role of biofuels in commercial air transport- biojetfuel,” September 2012: www.bioenergytrade.org



Biofuel plantations in Guatemala use much of the available water for irrigation. (Photo: Richard Perry/The New York Times)

To date, the EC has approved 12 voluntary schemes from bodies such as the Roundtable on Responsible Soy and the Roundtable on Sustainable Palm Oil — two corporate dominated bodies committed to the expansion of monocultures of soybean and oil palm respectively.²³ This points to how narrow the criteria for sustainability criteria are. There is nothing in the EC guidelines about social impacts and, when it comes to environmental impacts, only direct land use changes such as the clearing of forests are considered, with no consideration given to the indirect land use changes that occur when agricultural lands and water sources are affected by the production of biofuel crops.²⁴ One study looking at indirect

land use changes from biofuels concluded that the EU's biofuel targets will result in the conversion of up to seven million hectares of natural ecosystems into agricultural production.²⁵

Despite the reports and studies commissioned by the EC itself that show the importance of indirect land use changes in understanding the impacts of biofuels, the EC decided to drop indirect land use changes from its October 2012 proposal and put off action to 2017 when it promises to review the scientific evidence.²⁶

23. http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm

24. The European Commission is, however, required to report every two years on the social sustainability of its biofuels policies based on the effects/damages that have already taken place. See: Anders Dahlbeck, "Fuel for thought: Addressing the social impacts of EU biofuels policies," 25 April 2012: <http://www.actionaid.org/eu/publications/fuel-thought-addressing-social-impacts-eu-biofuels-policies>

25. FOEI, Greenpeace, Bird Life International, and others, "Driving to destruction: The impacts of Europe's biofuel plans on carbon emissions and land," November 2010: <http://www.greenpeace.org/eu-unit/en/Publications/2010/driving-to-destruction-08-11-101/>

26. Suppliers are required to report indirect land use change emissions, but the emissions data are not considered when determining whether a particular

The debate around “sustainability” should not obscure the simple reality that it is not possible to develop enough biofuel crops to meet today’s targets without displacing communities, undercutting food production and chopping down forests. Tacking a “sustainable” tag onto some of the supply does nothing to change this overall equation.

Choosing fuel over food

Beyond the land grabs, another nasty consequence of the surging demand for biofuels has generated more attention: its impact on food prices. Biofuels eat up over a third of coarse grain production in the US, the world’s largest exporter, and 80 percent of oilseed production in the EU, the world’s second largest importer. This is part of the reason why global stocks of these crops are at record lows. The United Nations Food and Agriculture Organization (FAO) calls biofuels “the largest source of new demand for agricultural production in the past decade” and says that they represent a new “market fundamental” affecting prices for all cereals.”

With food prices once again soaring, high-level agencies like the FAO and the Organisation for Economic Cooperation and Development are now calling for an end to regulations that require biofuels be blended into transport fuels, known as mandates. So too are corporate heavyweights from the food industry who compete for crops with biofuels producers.

“[Using biofuels] was well intentioned at the time, but when you have better information then you have to be coherent,” says Paul Bulcke, the CEO of Nestlé. “We say no food for fuel.”

Best estimates are that demand for food will increase by 70–100 percent by 2050.²⁷ The world will have to meet this new demand under much more difficult circumstances. Already the amount of arable land per capita has decreased from 0.41 to 0.21 hectares since 1960, and this land is increasingly degraded, with around 25 percent of the world’s agricultural land now classified as highly degraded. Climate change will make things worse, pushing the total “drought affected” areas of the world

biofuel feedstock meets the EC’s sustainability criteria. The main impact assessment study commissioned by the EU on the impacts of indirect land use changes from biofuels can be found here: http://ec.europa.eu/energy/renewables/biofuels/land_use_change_en.htm
27. Potsdam Institute for Climate Impact Research and Climate Analytics, “Turn Down the Heat: Why a 4°C Warmer World Must be Avoided”, a report for the World Bank, November 2012.

from a current 15.4 percent of global cropland to 44 percent by 2100.

It will also be harder to increase yield from the available lands. The FAO says that previous increases in global agricultural production are not sustainable and predicts that growth will slow by a third over the next decade. Other studies suggest that with climate change, world agricultural production could dramatically decrease – by 15 to 25 percent!²⁸

Water too is a major problem. Agriculture accounts for 70 percent of global water consumption. But the depletion of water sources and competition from other uses, such as industry and urbanisation, will reduce agriculture’s share to 45 percent by 2050. It will be hard enough to squeeze out the food production required to feed the planet under these conditions.

Add current biofuel targets to the mix, and you have a recipe for mass hunger. Consider the Addax example: this one sugar cane project will use 26 percent of Sierra Leone’s largest river’s flow during the driest months, February to April. Now multiply that by a thousand.

The political and economic rationale for the biofuel boom was always weak: policies like the EC mandate were a political response to high oil prices, available capital, and exaggerated hopes for crops like jatropha. Biofuels were also promoted as a way to reduce greenhouse gas emissions, but current biofuel production fails to achieve reductions and next-generation sources remain a distant reality.

Using the world’s precious farm lands and water sources for the production of fuels for cars is plainly irresponsible. All the more so since these lands are often home to the very rural communities whose food systems provide the world with the models we need to reverse the environmental crisis that our addiction to fossil fuels has generated. These communities and the food systems they sustain are not renewable.

A couple of simple actions can make a huge difference, particularly in the EU: drop the efforts to “regulate” biofuels and instead kill the mandates and subsidies to the industry. Without these crutches, demand for biofuels will shrink significantly, and that will take away some of the pressure on lands and water that rural communities are facing across the planet.

28. See data in GRAIN, “The international food system and the climate crisis,” October 2009: <http://www.grain.org/e/734>

European companies export land grabs, import profits

Europe's biofuel future is on full display in Rotterdam. The continent's largest port is the central conduit for much of the agricultural commodities and transport fuels that European companies source from around the globe. Around a third of all palm oil imports into the EU passes through Rotterdam.¹ No surprise then that this is where the biggest names in the European biofuel industry are setting up shop.

Leading the charge is Neste Oil, the state-owned Finnish oil company. It finished construction of a renewable diesel plant in Rotterdam in 2011 that will churn out over 900 million litres a year, using palm oil for at least 50 percent of its raw materials. The renewable diesel plant is the world's second largest, only slightly smaller than Neste Oil's plant in Singapore, which also converts palm oil to diesel for export to Europe.

Next door to Neste Oil's Rotterdam operation is a massive ethanol plant owned by the Spanish energy company Abengoa. In recent years, it has invested heavily in ethanol production in Europe, the US, Brazil, and, most recently, Uruguay. Its Rotterdam plant is the hub connecting the company's global production to the European market, where ethanol imports are on the rise. In 2009, one third of the ethanol imported through Rotterdam came from Brazil.

Swiss-based Glencore, Europe's second largest agricultural commodities trading house, owns two bio-diesel plants in Rotterdam, with a combined capacity of 740 million litres per year. Rotterdam is the main port of entry for soy-based biodiesel and Glencore, through a joint venture with two of Argentina's top soybean crushers, is the largest producer and exporter of biodiesel from Argentina, the main source of European soy-based biodiesel imports.²

The presence of Glencore, which not only trades agricultural commodities but also produces them on its own farms in Eastern Europe, South America and Australia, highlights the importance of vertical integration within the industry. Europe's biofuel companies are increasingly looking for full control over production, right down to the crops. Shell and BP, for instance, have spent hundreds of millions of euros buying up sugar cane plantations and mills in Brazil to produce ethanol. French commodities giant Louis Dreyfus is also buying up farmland and sugar plantations in South America to feed its ethanol and biodiesel plants.

As European biofuel demand fuels a global race for control over areas of cheap production of biofuel crops, so far that race is being won by Europeans, often with financial backing from European governments. European companies are responsible for a third of all the biofuel land grabs that have been reported since 2002 (see Table 1).

One of these companies is Tozzi Renewable Energy. On 16 November 2012, representatives of nine villages held a press conference in the city of Antananarivo, Madagascar to denounce the Italian company for taking away their lands as part of a 100,000 ha jatropha plantation that the company is constructing.

"We small peasants are forced to leave because men armed with guns have come to throw us off our lands," they told reporters.³

1. www.mvo.nl/LinkClick.aspx?fileticket=jsFVMZwZzkc%3D

2. Judith Taylor, "EU biodiesel producers eye growing Argentina exports," ICIS.com, 13 October 2009; "Vicentin and Glencore build a new biodiesel plant in Santa Fe," Cronista.com, 23 January, 2008.

3. "Soutenons les éleveurs et leur patrimoine contre l'accaparement de vastes surfaces de terres par la société Tozzi Green à Madagascar," TANY, 28 November 2012: <http://farmlandgrab.org/post/view/21352>

Going further

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Table 1: Land grabs for biofuels

Target Country	Company	Company Origin	Crop	Hectares
Angola	ENI	Italy	Oil palm	12,000
	Atlantica Group	Portugal	Oil palm	5,000
	Eurico Ferreira	Portugal	Sugar cane	30,000
	Gleinol	Portugal		13,000
	Quifel	Portugal	Oil seeds	10,000
	Odebrecht	Brazil	Sugar cane	55,000
	Marubeni	Japan	Sugar cane	66,000
Argentina	Infinita Renovable	Spain	Rapeseed	50,000
	Agrogeneration	France	Crops	1,700
Benin	Green Waves	Italy	Sunflower	250,000
	Complant	China	Sugar cane	4,800
	Agritech Holding	Singapore	Jatropha	93,488
Brazil	Colethanol	Western multinational	Sugar cane	100,000
	Louis Dreyfus	France	Sugar cane	329,000
	BioFuel Projects International B.V (BFP International)	Netherlands	Jatropha	5,000
	Biogreen Oil B.V.	Netherlands	Jatropha	40,000
	Clean Energy Brazil	UK	Sugar cane	30,000
	ETH Bioenergia	Brazil	Sugar cane	400,000
	Infinity Bio Energy	Brazil	Sugar cane	4,000
	Petrobras	Brazil	Oil palm	74,000
	Petrobras	Brazil	Oil palm	30,000
	Vale	Brazil	Oil palm	60,000
Burkina Faso	ADM	US	Oil palm	12,000
	Biocarburant SA (MBSA)	Netherlands	Jatropha	1,000
Cambodia	CAMLAND Co., Ltd.	Cambodia	Oil palm	16,000
	Heng Heap Investment	Cambodia	Jatropha	7,000
	Koh Kong Plantation Company Limited	Cambodia	Sugar cane	9,400
	LEANG HOUR HONG Import and Export, Agro Industry Development and Processing	Cambodia	Cassava	8,000
	Mean Rithy Co., Ltd	Cambodia		9,784
	Mong Reththy Investment Cassava Cambodia Co., Ltd	Cambodia	Cassava	1,800
	NTC Jacam	Cambodia	Jatropha	500
	Phnom Penh Sugar Company	Cambodia	Sugar cane	8,776
	VANNMA Import-Export Co.; Ltd	Cambodia	Cassava	1,200
	Golden Land Development Co., Ltd	China		4,900
	Carmadeno Venture (Cambodia) Limited	India	Sugar cane	7,635
	Fortuna Plantation (Cambodia) Limited	Malaysia	Jatropha	7,955
	BNA (Cam) Corp	South Korea	Cassava	7,500
	C.J Cambodia Co., Ltd/Muhak	South Korea	Cassava	8,000
	Crystal Agro Ltd	Thailand	Cassava	8,000
	30/4 Gialani Company Limited	Viet Nam		9,380
	Tong Min Group Engineering		Acacia, jatropha	7,465
Cameroon	Herakles	US	Oil palm	73,000
	Siva Group	India	Oil palm	200,000

Target Country	Company	Company Origin	Crop	Hectares	
China	AMG Bioenergy	Canada	Jatropha	133	
	Chinese government	China	Jatropha	666,667	
	CNOOC	China	Cassava	60,000	
	Legend Venture and Home Touch Holding	Singapore	Castor oil	12,400	
Colombia	Ecopetrol	Canada	Oil palm	17,000	
	Aceites Manuelita S.A.	Colombia	Oil palm	22,222	
	Bio D S.A.	Colombia	Oil palm	22,222	
	Biocombustibles sostenibles del caribe	Colombia	Oil palm	22,222	
	Consorcio El Labrador formed by Aportes San Isidro SA and C.I. Tequendama	Colombia	Oil palm	1,235	
	Ecodiesel de Colombia S.A.	Colombia	Oil palm	22,222	
	Maquilagro	Colombia	Sugar beet	15,000	
	Oleoflores	Colombia	Oil palm	15,555	
	Merhav Ampal	Israel	Sugar cane	10,000	
	Odin Energy Santa Marta Corporation S.A.	Japan	Oil palm	8,000	
Congo	Grupo Poligrow	Spain	Oil palm	60,000	
	ENI	Italy	Oil palm	70,000	
Côte d'Ivoire	FRI-EL	Italy	Oil palm	44,000	
	ADERCI	Côte d'Ivoire	Jatropha	100,000	
DRC	Valentine Yao	Côte d'Ivoire	Jatropha	200	
	Biocongo Global Trading	Spain	Oil palm	60,000	
	Carbon2Green	Canada	Jatropha	14,000	
	Greater Kingdom Group	China	Jatropha	10,000	
	ZTE	China	Oil palm	100,000	
East Timor	GTLeste Biotech	Indonesia	Sugar cane	100,000	
	F.E.P.E Amero Bio-Oil	Cyprus		50,000	
	I.D.C Investment	Denmark	Jatropha	15,000	
	Acazis AG	Germany	Castor Oil	56,000	
	Fri-el Group	Italy	Oil palm, jatropha	30,000	
	Nuove Iniziative Industriali SRL	Italy	Jatropha	40,000	
	OBM Ethio Renewable Energies	Italy		40,000	
	Global Agricultural Resources	Liechtenstein		60,000	
	Elva NederlandLtd	Netherlands	Jatropha	2,500	
	Kooy Bioflow B.VRecipient & Mekiya Agri Mechanization Service	Netherlands	Jatropha	200	
	SunBiofuels	UK	Jatropha	80,000	
	Amabasel trading organization	Ethiopia	Jatropha	20,000	
	Ethiopia	Etan Biofuels	Ethiopia		5,550
		Getachew Mulgeta	Ethiopia		25,000
Green Energy PLC		Ethiopia		50,000	
Jatropha Biofuels Agro-Industry		Ethiopia	Jatropha	100,000	
Yosef Ayalew		Ethiopia		1,500	
BHO Bio Products Plc		India	Cereals	27,000	
Emami Biotech		India	Jatropha, pulses	11,000	
Emami Biotech		India	Oil seeds	40,000	
S&P Energy Solutions Plc		India	Pongamia Pinnata	50,000	
VATIC International Business Plc		India	Jatropha	20,000	
Agropeace Bio		Israel	Castor oil	50,000	
Global Energy		Israel	Castor Oil	20,015	
Yehuda Hayun	Israel	Castor Oil, Chat	8,000		

Target Country	Company	Company Origin	Crop	Hectares
Ethiopia	Africa Sustainable Energy Corporation	US		20,000
	B&D Food Corporation	US	Sugar cane	18,000
	Global Energy Pacific	US	Jatropha	10,000
	J.M.B.O Biofuel Production	US		2,000
	Paul Morrel	US		10,000
	Paul Morrel	US		1,000
	Petropalm Corp Ethiopia	US	Castor oil, jatropha	50,000
Gambia, The	Ovidiu Tender	Romania	Jatropha	30,000
Ghana	Symboil	Germany	Oil palm	13,500
	BioFuel Africa (Solar Harvest)	Norway	Jatropha	950
	BioFuel Africa (Solar Harvest)	Norway	Maize	10,600
	Jatropha Africa	UK	Jatropha	120,000
	Brazilian government	Brazil	Sugar cane	2,700
	Kimminic Corp.	Canada	Maize, jatropha	13,000
	Gold Star Farms	Ghana	Jatropha	14,000
	Abellon CleanEnergy	India		10,000
	Galten Global Alternative Energy	Israel	Jatropha	100,000
	Herakles	US	Oil palm	4,364
	Bionor	Spain	Jatropha	10,000
	Agro Industrias Hame (Corporaci3n Olmeca)	Guatemala	Oil palm	40,000
	Agrocaribe SA	Guatemala	Oil palm	5,000
Biocombustibles de Guatemala (Ricardo Asturias)	Guatemala	Jatropha	700	
Ingenio Chawal Utz Aj	Guatemala	Sugar cane	5,000	
Inversiones de Desarrollo S.A INDESA (Grupo Maegli)	Guatemala	Oil palm	5,688	
Nacional AgroIndustrial S.A (NAISA)	Guatemala	Oil palm	5,000	
Palmas de Desarrollo S.A PADESA (Grupo Maegli)	Guatemala	Oil palm	2,518	
Tikindustrias (Grupo del Ingenio Azucarero El Pilar)	Guatemala	Oil palm	4,600	
Palmas del Ixcan, as subsidiary of Texas-based Green Earth Fuels LLC, controlled by Carlyle Group, Riverstone Holdings and Goldman Sachs funds.	US	Oil palm	2,500	
Guinea	Nuove Iniziative Industriali SRL	Italy	Jatropha	700,000
India	Mission NewEnergy Limited	Australia	Jatropha	194,000
	D1 Mohan Bio Oils Ltd.	India	Jatropha	9,000
	Indian government	India	Jatropha	85,900
	Indian government	India	Jatropha	350
	Indian government	India	Jatropha	180,000
	Indian government	India	Jatropha	2,000,000
	Indian government	India	Jatropha	150,000
	Nandan Biomatrix Limited	India	Jatropha	40,000
	Nandan Biomatrix Limited	India	Jatropha	800
	Shiva Distilleries-BAG	India	Jatropha	700
	Shiva Distilleries-BAG	India	Jatropha	500
	T. Shivaleekha Biotech	India	Jatropha	323
		India	Jatropha	400,000
			Jatropha	206

Target Country	Company	Company Origin	Crop	Hectares	
Indonesia	D1 Oils PLC	UK	Jatropha	500	
	Jatofil	Australia	Jatropha	10,000	
	K S Oils	India	Oil palm	55,847	
	Biodiesel Austindo and Masohi Agro Semesta	Indonesia	Jatropha	8,000	
	Molindo Raya	Indonesia	Cassava	10,000	
	PT National Sago Prima	Indonesia	Sago	21,000	
	Sinar Mas group	Indonesia	Maize, oil palm	1,100,000	
	Sinar Mas group	Indonesia	Oil palm	500,000	
	Kenya	HG Consulting	Belgium	Sugar cane	42,000
		Xenerga & Eurofuel tech	Germany	Jatropha	100,000
Nuove Iniziative Industriali SRL		Italy	Jatropha	50,000	
Bioenergy International		Switzerland	Jatropha	93,000	
Green Power Holding AG		Switzerland	Jatropha	30,000	
Bedford Biofuels		Canada	Jatropha	160,000	
Biwako Bio-Laboratory		Japan	Jatropha	30,000	
Omnican		Mauritius	Sugar cane	6,879	
Laos		ZTE	China	Cassava	50,000
		KV Import Export Co	Malaysia	Jatropha	500
	Xaysomboun Agriculture Development	Malaysia	Jatropha	1,000	
	Kolao Farm Co Ltd	South Korea	Jatropha	12,282	
Liberia	Equatorial Palm Oil	UK	Oil palm	169,000	
	J Oils	France	Jatropha	10,000	
	Magnard	France	Jatropha	1,200	
	NEO	France	Jatropha	30,000	
	Soabe	France	Oil seeds	4,500	
	Vaudo	France	Jatropha	1,500	
	Jatro Solutions	Germany	Jatropha	3,000	
	JSL Biofuels Madagascar; German investment funds involved in land grabbing by Profundo 2010	Germany	Jatropha	32,000	
	Madagascar	Delta Petroli	Italy	Jatropha	20,000
		Tozzi Renewable Energy	Italy	Jatropha	100,000
TRE		Italy	Jatropha	80,000	
NOTS		Netherlands	Jatropha	15,000	
Fuel Stock		UK	Jatropha	30,000	
UK GEM Biofuels		UK	Jatropha	452,500	
BioEnergyLtd John Bizeray		Australia	Jatropha	120,000	
COMPLANT		China	Sugar cane	10,000	
Flora Eco Power		Israel	Jatropha	30,000	
Global Agro-Fuel		Lebanon	Jatropha	100,000	
Bioenergy Invest		Madagascar	Jatropha	2,000	
DRAMCO		Madagascar	Jatropha	810	
MCD Suite D1		Madagascar	Jatropha	600	
SAIM		Madagascar	Sugar cane	1,520	
Sopremad		Madagascar	Sugar cane	15,000	
Osho Group		South Africa	Sugar cane	100,000	
Sithe Global		US	Oil palm	60,000	
Malaysia		ER Company		Jatropha	80,000
	Biofuel Projects International (BFP International)	Netherlands	Jatropha	62,500	
	Justin Group and Gaix Energy	South Korea	Cassava	30,000	

Target Country	Company	Company Origin	Crop	Hectares
Mali	MFC Nyetaa	Denmark	Jatropha	1,000
	Agro Energy Développement	France	Sunflower	2,605
	Biocarburant SA (MBSA)	Netherlands	Jatropha	1,000
	Mali Biocarburant	Netherlands	Jatropha	2,112
	Baba Seid Bally (SBB BIO)	Burkina Faso		10,000
	Assil Meroueh	Côte d'Ivoire	Jatropha	5,000
	Agroenerbio S. A.	Mali		40,000
	SOCIMEX	Mali	Jatropha	10,000
	SoSuMar	Mali	Sugar cane	14,100
Mexico	Government of Chiapas	Mexico	Oil palm	44,000
	Acciona Energia Mexico (filial de Acciona Energia, Espana)	Spain		2,500
	Endesa, Union Fenosa, Preneal, Iberdrola, Gamesa	Spain		5,000
	Global Clean Energy Holdings Inc. (GCEH)	US	Jatropha	3,581
Mozambique		Germany	Jatropha	100,000
	AVIA Spa (Aviam)	Italy	Jatropha	15,050
	Moncada Energy Group SRL	Italy	Jatropha	6,950
	Mozambique SAB	Italy	Jatropha	6,300
	Enerterra SA	Portugal	Jatropha	18,500
	Galp Energia	Portugal	Jatropha	5,000
	Prio Agricultura	Portugal	Maize, soybeans	9,234
	Quifel Agricola	Portugal	Oil seeds	23,000
	SGC Energia	Portugal	Jatropha	20,000
	Green Power Holding	Switzerland	Jatropha	2,800
	CAMEC	UK	Sugar cane	30,000
	D1 Oils	UK	Jatropha	5,348
	Principal Capital	UK	Sugar cane	18,000
	Sociedade Inveragro, SARL (ESV Group)	UK	Jatropha	11,000
	Viridesco	UK	Jatropha	1,000
	Vale	Brazil	Oil palm	30,000
	Kijani Energy	India	Jatropha	75,000
	Tata Chemicals	India	Sugar cane	24,000
	Bioenergia Mozambique	Italy	Jatropha	6,950
	Empresa nacional do Buzi & Galp	Mozambique	Jatropha	25,000
Eng Petiz	Mozambique	Sugar cane	200	
ECOMOZ	South Africa	Coconut, jatropha	21,000	
Grow Energy Zambeze	South Africa	Jatropha	15,000	
		Jatropha	15,000	
Nigeria	Fri-EI Green Power	Italy	Oil palm	11,292
	Global Biofuels Limited	Nigeria	Sorghum	65,000
	Casplex Ltd.		Cassava	15,000
	Coga Farms Limited		Cassava, maize	6,000
	EnviroFriendly Energy Ltd		Jatropha	9,369
	Future Energy Ltd.		Jatropha	5,000
	Jatropha Farmers Development Foundation		Jatropha	5,000

Target Country	Company	Company Origin	Crop	Hectares	
Peru	Bio Agro Heaven del Sur - Heaven Petroleum Operators	Peru	Jatropha	15,000	
	Grupo Romero through Agricola del Caynarachi S.A. (actually Palmas del Oriente S.A.)	Peru	Oil palm	3,000	
	Grupo Romero, through its subsidiary Agropecuaria del Shanusi SA	Peru	Oil palm	7,029	
	Maple Group	US	Sugar cane	13,500	
	Pure Biofuels	US	Oil palm	60,000	
	Pure Biofuels	US	Oil palm	14,000	
Philippines	D1 Oils PLC	UK	Jatropha	7,000	
	NRG Chemicals	UK	Jatropha	700,000	
	San Carlos Bio-Energy	UK	Sugar cane	5,000	
	Bioenergy North Luzon Inc.	Japan	Coconut	200,000	
	Green Future Innovations. Inc.	Japan	Sugar cane	11,000	
	Green Future Innovations. Inc., Korea ,	Japan	Maize	45,000	
	Herminio Teves Group,	New Zealand	Jatropha	45,300	
	Greenenergy	Philippines	Sugar cane	15,000	
	Philippine Forest Corp.	Philippines	Jatropha	7,450	
	Eastern Renewable Fuels Corp.,	Saudi Arabia	Cassava	273,000	
	Biosystems Co. Ltd	South Korea	Mariculture	100,000	
	Central Luzon Bioenergy Corp., PNOG-AFC, ,	South Korea	Cassava, jatropha	173,900	
	Ecoglobal	South Korea	Jatropha	11,000	
Senegal	Nuove Iniziative Industriali SRL	Italy	Jatropha	50,000	
	Tempieri Financial Group	Italy	Sunflower	20,000	
	Bioking	Netherlands	Jatropha	3,000	
	Ovidiu Tender	Romania	Jatropha	100,000	
	Sococim	Senegal	Jatropha	11,000	
Sierra Leone	Quifel Agribusiness	Portugal	Cassava, oil palm	126,000	
	Addax Bioenergy	Switzerland	Sugar cane	57,000	
	Caparo Group	UK	Oil palm	43,000	
	Complant	China	Sugar crops	1,200	
	Siva Group	Singapore	Oil palm	80,000	
South Sudan	Nile Trading & Development	US	Jatropha	600,000	
Swaziland	Fuel Ethanol and Agricultural Plantation	South Africa	Sweet sorghum	15,000	
	FELISA	Belgium	Oil palm	10,000	
	Diligent Energy Systems	Netherlands	Jatropha	3,500	
	Sekab	Sweden	Sugar cane	200,000	
	CAMS Group	UK	Sorghum	45,000	
	Biodiesel East African Ltd.	Kenya	Jatropha	10,000	
	KITOMONDO Ltd.	Tanzania	Jatropha	2,000	
	National Service (JKT)	Tanzania	Jatropha	700	
	Tanzania Green	Tanzania	Jatropha	200	
	Tanzania	Safe Production Ltd	Turkey	Maize	3,500
		InfEnergy Co. Ltd	UK	Oil palm	5,818
		Africa Biofuel and Emission Reduction Co. TZ. Ltd (Wilma Group)	US	Croton	20,000
		AgriSol Energy LLC	US	Maize	80,317
		AgriSol Energy LLC	US	Maize	219,800
		Sithe Global Power, LLC	US	Oil palm	50,000
African Green Oils			Oil palm	30,000	
CHAWAGWA			Jatropha	200	

Target Country	Company	Company Origin	Crop	Hectares
Tanzania	Donesta Ltd & Savannah Biofuels LTD		Jatropha	2,000
	DONESTER		Jatropha	2,000
	Eco Green Fuels Tanzania Ltd.			500
	RUBANA Farm		Jatropha	400
	SAVANA Biofuel		Jatropha	5,000
	Shanta Estates Ltd		Jatropha	14,500
	Tanzania Biodiesel Plant Ltd		Oil palm	16,000
	Trinity Consultants / Bioenergy TZ Ltd		Jatropha	16,000
Thailand	University of Kasetsart and Viengsa agricultural cooperative	Thailand	Jatropha	240
Ukraine	Agro Generation	France	Barley, maize	50,000
	Sustainable Bio Energy Holding GmbH	Germany	Rapeseed, soybeans	11,600
Viet Nam	Green Energy Vietnam	Viet Nam	Jatropha	10,000
Zambia	Viridesco	UK	Jatropha	300
	Export Trading Group	Singapore	Jatropha	57,000
	AGZAM	South Africa	Sugar cane	15,000
		UAE	Jatropha	200,000
	Linknet	Zambia	Jatropha	1,215
Zimbabwe	PrivaServe Foundation (Macha Works)		Jatropha	200
	Zim Bio Energy	South Africa	Sugar cane	100,000

17,179,423

Sources: Land Matrix, GRAIN, Biofuels Digest

Table 2: Biofuels mandates

Target Country	Mandate biodiesel	Mandate ethanol	Notes
Angola		0,1	
Argentina	0,07	0,05	September 2012. Was scheduled to be increased to 10%
Australia	0,02	0,04	Only in New South Wales State.
Brazil	0,05	18-20%	Biodiesel mandate implemented in 2010 and plans are to increase biodiesel blend to 10% by 2014. Mandate for ethanol fluctuates based on sugar demand. In 2011 it was at 25%.
Canada	0,02	5-8%	Federal biodiesel mandate takes effect in 2012, but production is well below the mandate. The ethanol mandates vary according to provinces, but a national 5% mandate is being implemented.
China		0,1	China has a 15% overall target for 2020, but currently only nine Chinese provinces have required 10% ethanol blends.
Colombia		0,08	
Costa Rica	0,2	0,07	
Ethiopia		0,05	
EU			
India		0,05	
Indonesia	0,025	0,03	
Jamaica		0,1	
Japan			
Malawi		0,1	
Malaysia	0,05		The mandate remains far from being met
Mexico		0,02	A 2% ethanol mandate in place in Guadalajara, and will expand the blending mandate to Mexico City and Monterrey.
Mozambique		0,1	
Panama		0,02	Panama is preparing to introduce an ethanol mandate beginning with 2% in April 2013, rising to 5% from April 2014, hitting 7% in April 2015 and reaching 10% by April 2016.
Paraguay	0,01	0,24	
Peru	0,02	0,078	
Philippines	0,02	0,1	Production is far below the mandate level for ethanol
South Africa		0,1	
South Korea	0,025		
Sudan		0,05	
Taiwan	0,01		
Thailand	0,03		Incentives are also provided for ethanol.
Uruguay	0,02		Uruguay plans to move to a 5% mandate for both ethanol and biodiesel for 2015.
US	0,01	0,09	US fuels are set according to volumes not percentages.
Vietnam		0,05	

Table 3: Land grabs for jatropha, 2002-2012

Target Country	Company	Company origin	Hectares
Benin	Agritec		32,000
	Biogreen Oil B.V.	Netherlands	40,000
Brazil	BioFuel Projects International B.V (BFP International)	Netherlands	5,000
	Biocarburant SA (MBSA)	Netherlands	1,000
Burkina Faso	Heng Heap Investment	Cambodia	7,000
	NTC Jacam	Cambodia	500
Cambodia	Fortuna Plantation (Cambodia) Limited	Malaysia	7,955
	AMG Bioenergy	Canada	133
China	Chinese government	China	666,667
	ADERCI	Côte d'Ivoire	100,000
Côte d'Ivoire	Valentine Yao	Côte d'Ivoire	200
	Carbon2Green	Canada	14,000
DRC	Greater Kingdom Group	China	10,000
	I.D.C Investment	Denmark	15,000
Ethiopia	Amabasel trading organization	Ethiopia	20,000
	Jatropha Biofuels Agro-Industry	Ethiopia	100,000
	Emami Biotech	India	11,000
	VATIC International Business Plc	India	20,000
	Nuove Iniziative Industriali SRL	Italy	40,000
	Elva NederlandLtd	Netherlands	2,500
	Kooy Bioflow B.VRecipient & Mekiya Agri Mechanization Service	Netherlands	200
	SunBiofuels	UK	80,000
	Global Energy Pacific	US	10,000
	Gambia, The	Ovidiu Tender	Romania
Gold Star Farms		Ghana	14,000
Ghana	Galten Global Alternative Energy	Israel	100,000
	BioFuel Africa (Solar Harvest)	Norway	950
	Jatropha Africa	UK	120,000
Guatemala	Biocombustibles de Guatemala (Ricardo Asturias)	Guatemala	700
	Bionor	Spain	10,000
Guinea	Nuove Iniziative Industriali SRL	Italy	700,000
	Mission NewEnergy Limited	Australia	194,000
India		India	400,000
	T. Shivaleekha Biotech	India	323
	Indian government	India	85,900
	Indian government	India	350
	D1 Mohan Bio Oils Ltd.	India	9,000
	Shiva Distilleries-BAG	India	700
	Shiva Distilleries-BAG	India	500
	Indian government	India	180,000
	Indian government	India	2,000,000
	Indian government	India	150,000
Nandan Biomatrix Limited	India	40,000	

Target Country	Company	Company origin	Hectares
India	Nandan Biomatrix Limited	India	800
			206
Indonesia	Jatoil	Australia	10,000
	Biodiesel Austindo and Masohi Agro Semesta	Indonesia	8,000
	D1 Oils PLC	UK	500
Kenya	Bedford Biofuels	Canada	160,000
	Xenerga & Eurofuel tech	Germany	100,000
	Nuove Iniziative Industriali SRL	Italy	50,000
	Biwako Bio-Laboratory	Japan	30,000
	Bioenergy International	Switzerland	93,000
	Green Power Holding AG	Switzerland	30,000
	KV Import Export Co	Malaysia	500
Laos	Xaysomboun Agriculture Development	Malaysia	1,000
	Kolao Farm Co Ltd	South Korea	12,282
Madagascar	BioEnergy Ltd John Bizeray	Australia	120,000
	J Oils	France	10,000
	NEO	France	30,000
	Vaudo	France	1,500
	Magnard	France	1,200
	Jatro Solutions	Germany	3,000
	JSL Biofuels Madagascar; German investment funds involved in land grabbing by Profundo 2010	Germany	32,000
	Flora Eco Power	Israel	30,000
	Tozzi Renewable Energy	Italy	100,000
	TRE	Italy	80,000
	Delta Petroli	Italy	20,000
	Global Agro-Fuel	Lebanon	100,000
	DRAMCO	Madagascar	810
	MCD Suite D1	Madagascar	600
	Bioenergy Invest	Madagascar	2,000
	NOTS	Netherlands	15,000
	Fuel Stock	UK	30,000
UK GEM Biofuels	UK	452,500	
ER Company		80,000	
Malaysia	Biofuel Projects International (BFP International)	Netherlands	62,500
Mali	Assil Meroueh	Côte d'Ivoire	5,000
	MFC Nyetaa	Denmark	1,000
	SOCIMEX	Mali	10,000
	Biocarburant SA (MBSA)	Netherlands	1,000
	Mali Biocarburant		2,112
Mexico	Global Clean Energy Holdings Inc. (GCEH)	US	3,581

Target Country	Company	Company origin	Hectares
Mozambique		Germany	100,000
	Kijani Energy	India	75,000
	AVIA Spa (Aviam)	Italy	15,050
	Mozambique SAB	Italy	6,300
	Moncada Energy Group SRL	Italy	6,950
	Empresa nacional do Buzi & Galp	Mozambique	25,000
	Galp Energia	Portugal	5,000
	SGC Energia	Portugal	20,000
	Enerterra SA	Portugal	18,500
	Grow Energy Zambeze	South Africa	15,000
	Green Power Holding	Switzerland	2,800
	Viridesco	UK	1,000
	D1 Oils	UK	5,348
			15,000
		Bioenergia Mozambique	
	Sociedade Inveragro, SARL		6,334
Nigeria	Jatropa Farmers Development Foundation		5,000
	Future Energy Ltd.		5,000
	EnviroFriendly Energy Ltd		9,369
Peru	Bio Agro Heaven del Sur - Heaven	Peru	15,000
	Petroleum Operators		
Philippines	Herminio Teves Group,	New Zealand	45,300
	Philippine Forest Corp.	Philippines	7,450
	Ecoglobal	South Korea	11,000
	D1 Oils PLC	UK	7,000
	NRG Chemicals	UK	700,000
Senegal	Nuove Iniziative Industriali SRL	Italy	50,000
	Bioking	Netherlands	3,000
	Ovidiu Tender	Romania	100,000
	Sococim	Senegal	11,000
South Sudan	Nile Trading & Development	US	600,000
Tanzania	Biodiesel East African Ltd.	Kenya	10,000
	Diligent Energy Systems	Netherlands	3,500
	KITOMONDO Ltd.	Tanzania	2,000
	Tanzania Green	Tanzania	200
	National Service (JKT)	Tanzania	700
	Donesta Ltd & Savannah Biofuels LTD		2,000
	Shanta Estates Ltd		14,500
	Trinity Consultants / Bioenergy TZ Ltd		16,000
	DONESTER		2,000
	SAVANA Biofuel		5,000
	RUBANA Farm		400
CHAWAGWA		200	
Thailand	University of Kasetsart and Viengsa agricultural cooperative	Thailand	240
Viet Nam	Green Energy Vietnam	Viet Nam	10,000

Target Country	Company	Company origin	Hectares
Zambia	Export Trading Group	Singapore	57,000
		UAE	200,000
	Viridesco	UK	300
	Linknet	Zambia	1,215
			9,128,275

Sources: Land Matrix, GRAIN, Biofuels Digest



GRAIN is a small international non-profit organisation that works to support small farmers and social movements in their struggles for community-controlled and biodiversity-based food systems. Against the grain is a series of short opinion pieces on recent trends and developments in the issues that GRAIN works on. Each one focuses on a specific and timely topic.

The complete collection of Against the grain can be found on our website at www.grain.org/article/categories/13-against-the-grain

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