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## Biofuels boom in Africa as British firms lead rush on land for plantations

Controversial fuel crops linked to rising food prices and hunger, as well as increased greenhouse gas emissions

**Damian Carrington** and Stefano Valentino The Guardian, Tuesday 31 May 2011 21.00 BST



An Ivory Coast nursery for jatropha, a non-edible plant whose oil-rich seeds can be processed into biodiesel. Photograph: Kambou Sia/AFP/Getty Images

British firms have acquired more land in <u>Africa</u> for controversial biofuel plantations than companies from any other country, a Guardian investigation has revealed.

Half of the 3.2m hectares (ha) of biofuel land identified – in countries from <u>Mozambique</u> to <u>Senegal</u> – is linked to 11 British companies, more than any other country.

Liquid fuels made from plants – such as bioethanol – are hailed by some as environmentally-friendly replacements for fossil fuels. Because they compete for land with crop plants, <u>biofuels</u> have also been linked to <u>record food prices</u> and <u>rising hunger</u>. There are also fears they can increase <u>greenhouse gas emissions</u>.

A market has been created by British and EU laws requiring the blending of rising amounts of biofuels into petrol and diesel, but the rules were condemned as unethical and "backfiring badly" in April by a Nuffield Council on Bioethics commission. In the UK, only 31% of biofuels used meet voluntary environmental standards intended to protect water supplies, soil quality and carbon stocks in the source country.

There are no central records of land acquisitions in Africa, but research by the Guardian revealed the scale of the biofuels rush in sub-Saharan Africa – 100 projects and 50 companies in more than 20 countries.

Crest Global Green <u>Energy</u> has the largest recorded landholding, 900,000ha in <u>Mali, Guinea</u> and Senegal. Tom Stuart, the chief executive, said: "It is true in some cases [that biofuels displace <u>food</u>], but in our projects we 'inter-crop', planting as much food as biofuel on the marginal

agreement, and that's normally written into contracts at government level."

Another UK company, Sun Biofuels, leased 8,000ha in Tanzania where it grows *Jatropha curcas*, a non-edible plant whose oil-rich seeds can be processed into biodiesel. "We'll start harvesting and producing in two years," said Peter Auge, office manager in Tanzania. "The main attraction for us is exporting to Europe."

Claims that *J curcas* use prevents biofuels competing with food because it grows easily on marginal and arid land unsuitable for other agriculture have been challenged even within the industry. "Growing jatropha in a profitable way on dry lands is a myth. It needs water, fertilisers and pesticides to provide high yields," Auge said. Jamidu Katima, at the University of Dar es Salaam, is critical of biofuels guidelines adopted by Tanzania's government in 2010. "There are no plans to build refineries, nor obligations for foreign investors to reserve part of their output for the domestic market," he said.

Another risk is that biofuel use could increase carbon emissions by increasing destruction of forests when displaced local farmers clear land. The Institute of European Environmental Policy recently said carbon released from deforestation linked to biofuels could exceed carbon savings by 35% in 2011 rising to 60% in 2018. Currently, this indirect impact is not considered in European sustainability guidelines.

James Smith, professor of African and Development Studies at Edinburgh University, said: "Private investment is running far ahead of our knowledge of the impacts of biofuels, such as land dispossession. This action is eroding the UK's position of enlightenment on development issues."

Unpublished research by the charity <u>ActionAid</u>, seen by the Guardian, confirms the picture of scores of projects amassing millions of hectares on the east and west coasts of Africa. "I suspect the estimates are actually quite conservative," said Smith.

Norman Baker, the Liberal Democrat junior transport minister, said: "I consider the sustainability of biofuels to be paramount. No biofuel will count towards our targets unless it meets certain sustainability requirements. But we are pushing [Europe] to go further, to reduce the risk of knock-on effects, including deforestation in new areas."

He added: "Only a tiny proportion – less that 0.1% - of UK biofuel has come from Africa."

As oil prices rise, said Jeremy Woods, a lecturer in bioenergy at Imperial College London, <u>biofuels could boom</u>. "Once oil is over \$70 a barrel, conventional and new generation biofuels become cost competitive. When oil and biofuels are competitive, we are into a different world."

Expansion of the biofuels industry has been fuelled by capital raised on the Alternative Investment Market of the London Stock Exchange. In the Guardian survey Italy is the next biggest player with seven companies, followed by Germany (six), France (six) and the US (four). Brazil and China have been acquiring land in Africa for biofuels and food but the investigation identified only a handful of established biofuels projects. The database of biofuels projects in Africa was compiled with the help of the University of California Berkeley's Africa Reporting Project.

Some projects provide local benefits through investment, employment

analysed 12 contracts from African land deals. "Some of the contracts we analysed only contain vague and unenforceable promises." Some have 100-year leases, at very low or free rent and priority access to water, he added. "Extensive commercial plantations dislocate rural communities from their land", said Cotula. "Instead, self-managed biofuels production can offer cheaper energy and complementary sources of income".

The chief executive of Sun Biofuels, Richard Morgans said: "Our company produces sustainable and ethical biofuels – categorically yes. We would welcome higher sustainability standards, but you do have to balance this with economic development. If you are a local [in Tanzania or Mozambique] and need a job, you probably aren't worried about whether the orangutans sleep at night. It's also insulting to say African governments can't run their own affairs."

A community-based approach is embraced by a few investors. "Our farmers in Mozambique are given seedlings to grow jatropha on their own land with the option to sell the seeds back to us," says Chris Hunter, of UK-based <u>Viridesco</u>. "We help smaller plantations that cater to the developing world markets, as opposed to big monocultures that service the developed world's energy needs".

UK companies were the first into Africa in 2005, but this has not been without problems. <u>D1 Oils</u> froze its export plans and started supplying locally in Malawi and Zambia, following the failure in 2009 of its joint-venture with BP, which doubted jatropha's market potential. Last year <u>GEM Biofuels</u>, operating in Madagascar, suspended its LSE quotation for four months.

The revelation of the central role of UK companies in biofuels coincides with a report from Oxfam forecasting that the price of staple <u>foods will</u> <u>more than double in the next 20 years</u>. The report identifies biofuels as a factor and demands that western governments end biofuel policies that divert food to fuel for cars. "We are sleepwalking towards an age of avoidable crisis," said Oxfam's chief executive, Barbara Stocking. "One in seven people on the planet go hungry every day despite the fact that the world is capable of feeding everyone. The food system must be overhauled."

## Biofuels grown in African countries

| COUNTRY<br>OF ORIGIN | NUMBER OF<br>COMPANIES | COUNTRIES<br>WITH LAND<br>CONCESSIONS                                                                                    |  |
|----------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------|--|
| UK                   | 11                     | Ghana, Guinea,<br>Liberia,<br>Madagascar,<br>Malawi, Mali,<br>Mozambique,<br>Namibia,<br>Senegal,<br>Tanzania,<br>Zambia |  |
| Italy                | 7                      | Congo<br>Brazzaville,<br>Ethiopia,<br>Ghana, Guinea,<br>Kenya, Senegal,                                                  |  |
| Germany              | 6                      | Ethiopia,<br>Ghana,<br>Madagascar,<br>Mali, Kenya,<br>Tanzania,<br>Zambia,                                               |  |
| France               | 6                      | Renin Burkina                                                                                                            |  |

|                                                                                                                                        |                    | Mozambique<br>Senega <b>l</b> , Togo                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------|
| USA                                                                                                                                    | 4                  | Burkina Faso,<br>Ethiopia, Mali,<br>Mozambique,<br>Kenya,<br>Tanzania, Sierra<br>Leone, Togo,<br>Uganda |
| Canada                                                                                                                                 | 4                  | DR Congo<br>Malawi,<br>Mozambique,<br>Kenya, Zambia                                                     |
| Scandinavian countries                                                                                                                 | 4                  | Ghana,<br>Tanzania                                                                                      |
| Belgium                                                                                                                                | 3                  | Cameroon,<br>Ethiopia,<br>Tanzania                                                                      |
| Switzerland                                                                                                                            | 3                  | Malawi, Kenya,<br>Sierra Leone                                                                          |
| Netherlands                                                                                                                            | 2                  | Tanzania                                                                                                |
| Cyprus                                                                                                                                 | 1                  | Ghana, Ivory<br>Coast                                                                                   |
| UK<br>COMPANY                                                                                                                          | LAND<br>CONCESSION | COUNTRIES<br>WITH LAND<br>CONCESSIONS                                                                   |
| Crest Global<br>Green<br>Energy                                                                                                        | 900000             | Guinea, Mali,<br>Senegal                                                                                |
| Gem<br>Biofue <b>l</b> s                                                                                                               | 452500             | Madagascar                                                                                              |
| Equatorial<br>Biofuels plc                                                                                                             | 80000              | Liberia                                                                                                 |
| Kavango<br>Bioenergy<br>Ltd                                                                                                            | 70000              | Namibia                                                                                                 |
| Jatropha<br>africa                                                                                                                     | 50000              | Ghana                                                                                                   |
| Cams Group                                                                                                                             | 20000              | Tanzania                                                                                                |
| Principle<br>energy                                                                                                                    | 20000              | Mozambique                                                                                              |
| Sun Biofue <b>l</b> s                                                                                                                  | 13000              | Mozambique,<br>Tanzania                                                                                 |
| D1 Oils                                                                                                                                | 5000               | Ma <b>l</b> awi, Zambia                                                                                 |
| Viridesco                                                                                                                              | 175                | Mozambique                                                                                              |
| Sustainable<br>Agroenergy                                                                                                              | n.a.               | Senegal                                                                                                 |
| Source: data research, not including unverified projects                                                                               |                    |                                                                                                         |
| Remark:<br>concessions<br>include all<br>negotiated<br>land,<br>whether it is<br>only agreed,<br>formally<br>leased or<br>already used |                    |                                                                                                         |

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