



# FOOD, FARMERS AND FUEL:

Balancing Global Grain and Energy  
Policies with Sustainable Land Use

**CONTENTS**

Executive Summary .....3

Introduction .....5

Agrofuel Policies and Production  
in the United States .....6

European Directives  
Increase Demand .....9

Northern Agrofuel Demands  
Spur Global Policy Shifts .....12

Country Case Studies

    Brazil:  
    New Pressures on Land Use  
    and Food Production .....13

    Guatemala:  
    Increasing Land Concentration  
    and Re-Concentration .....15

    Ghana:  
    Racing Forward without  
    Adequate Consultation .....16

    Mozambique:  
    Production Expands Before  
    Policies are in Place .....17

    Senegal:  
    Governmental Enthusiasm Outstrips  
    Understanding of Consequences .....18

Conclusion and Recommendations .....19



## EXECUTIVE SUMMARY

The public debate on agrofuels changed dramatically over the past year. What started out as an intriguing proposal on an apparently innovative alternative fuel source quickly turned into an important and contentious topic of international discussion. The United States, the European Union and many developing countries set ambitious targets for agrofuel consumption. But these goals were not matched by appropriate caution about the potential impacts of this new demand for agricultural goods on food prices, the environment, or local economies.

The sharp rise in food prices around the world brought these issues into the public focus. While estimates of the precise impact of agrofuel production on food prices vary, it is clear that the greater demand for grains resulting from that production—along with rising petroleum costs, increased droughts and flooding resulting from climate change, and the lack of adequate public support for agricultural production—all had major impacts on food prices. Though commodity prices have since fallen from their peaks in early 2008, the underlying vulnerability of farmers and consumers remains intact. Each of the causes of food price volatility requires urgent attention to address the impacts on both producers and consumers.

ActionAid works with partners in developing countries to find solutions to the food crisis that respond to poor peoples' needs. In country after country, we hear that farmers want to build on their existing knowledge and resources to develop sustainable approaches to food production. They want to use fewer imported petroleum-based inputs and adapt to the impacts of climate changes that are

already affecting their yields. Farmers need access to markets, credit, technical assistance, water, and land to increase food production and fulfill their communities' and their nations' right to food.

ActionAid believes that it is time to stop the headlong rush to agrofuel production, to assess the impacts to date, and to listen to what farmers and consumers are saying about their needs for food and fuel production. Rich countries should scrap their targets and incentives for agrofuel production. Only after governments from both the North and South fully assess the impacts should they implement a more sustainable approach that balances the need for food production with the global demand for renewable energy.

## KEY FINDINGS

- U.S. renewable fuels standards and subsidies have contributed to food price volatility. Corn prices at the Chicago Board of Trade (the principal global commodity futures exchange) increased from an average of \$2 a bushel in 2006 to nearly \$7 in July 2008. By October, however, those prices had plummeted to less than \$4 a bushel, a level just barely above the cost of production. This volatility has been harmful to farmers in the United States and around the world.
- The European Union Biofuels Directive has also set ambitious targets for the use of agrofuel in transport fuels. This has spurred increased imports of agrofuels from developing countries and increased investments in agrofuel plantations abroad. Mounting public concern on the impacts of that demand has led to a new debate on possible revisions to those targets.

- In both the United States and the European Union, energy security has been cited as a justification for the expanded use of agrofuels. This approach ignores the bigger problem of the unreasonably high demand that U.S. and E.U. consumers generate for fuel. A real solution to energy security would include steps to reduce fuel consumption by raising vehicle fuel efficiency standards and increasing the availability of public transportation, among other measures.
- In Brazil, increasing sugar production for ethanol has contributed to rising food prices and land concentration. Land planted for sugar could increase from the present level of 7 million hectares to 13 million by 2015. There is evidence that cattle ranchers and other agricultural producers displaced from the southern Brazil are pushing the agricultural frontier north, potentially leading to pressure on sensitive ecosystems.
- In Guatemala, the expansion of land under cultivation for sugarcane and palm oil has resulted in both concentration of land ownership (when smaller scale farmers sell their lands to larger landowners) and “re-concentration” (when large plantations are sold and consolidated into even larger landholdings). Both processes affect rural livelihoods and food security.
- The Ghanaian government has established an ambitious plan to increase production of and investment in agrofuels. Unfortunately, many of these efforts have taken place without adequate consultations or negotiations with local communities. In some cases, communities are being dispossessed of lands that have been classified as “marginal.” Ghanaian women have objected to the clearing of land that once grew sheanut trees, which had been an important source of income during the rainy season.
- In Mozambique, the political debate on agrofuels has advanced rapidly since Brazilian President Luiz Inácio Lula da Silva’s visit in 2005. The government’s initial plans called for small and medium-scale production carried out primarily by family farmers. Since then, however, there has been a sharp increase in private investment,

especially for sugar production. This has resulted in pressure to annex local lands for agrofuel production. As of June 2008, a total of 21 new agrofuel production projects had been presented to the government for approval.

- In Senegal, a country that experienced riots earlier this year because of rising food prices, the government has launched an ambitious plan to expand agrofuel production. This has created new pressures on so-called marginal lands. In the Bignona area, for example, the Forestry Department estimates that clearing forests to create plots of jatropha (a drought resistant, high-yielding oil crop) could entail a 68 percent reduction in income sources for rural populations. Women are hit especially hard by such changes as they gather firewood, nuts and other forest products to supplement their households’ incomes and nutritional needs.

## RECOMMENDATIONS

- The United States and European Union should end targets and subsidies for agrofuels.
- The United States and European Union should establish enhanced energy efficiency standards to reduce their demand for energy.
- The United Nations should establish a commission that includes the participation of affected sectors of civil society to examine the impacts of current agrofuel investments and targets on land rights, greenhouse gas emissions, and access to food.
- The United Nations should advance efforts to establish a system of international commodity reserves to reduce food price volatility.
- National governments should establish mechanisms to ensure that local communities are fully consulted on the potential impacts of agrofuel investments on their rights to land, livelihoods and food. No investment proposal should be approved without their informed consent.
- Women must be consulted and approve any land sales involving family or communal lands. Women’s sources of livelihood should not be

destroyed, and women must be consulted on alternative use of natural resources in their communities, as they are the people who bear the brunt of destruction of these natural resources.

- Governments should establish regional and national policy frameworks to ensure that efforts to diversify energy supplies do not undermine local food production or the right to food.
- Governments should impose a moratorium on the expansion of agrofuel production until the United Nations commission reports on the full range of impacts and governments establish the necessary protections on community rights, women's rights, and the right to food.

## INTRODUCTION

Over the last two years, the public debate on agrofuels<sup>1</sup> has undergone dramatic shifts. What started as an intriguing proposal on an alternative energy source quickly changed to a major topic of international discussions in 2007, highlighted by Presidents George W. Bush and Luiz Inácio Lula da Silva's agreement in March of that year to promote the expansion of agrofuel production around the world. As the European Union and other nations jumped on board to increase their targets for agrofuel consumption, demand skyrocketed. Investment levels and prices rose quickly in response, well beyond what most observers had initially anticipated.

And then the doubts started to emerge—first as technical queries and then as alarmed reactions to drastic increases in food prices, which raised serious questions about the impacts of agrofuel production on climate change. Estimates of the degree to which agrofuel demand explained rising food prices vary considerably, from the three percent estimated by the U.S. Department of Agriculture, to a World Bank calculation that 75 percent of the increase in food prices is attributable to agrofuel production. The truth is undoubtedly somewhere in between those two extremes, but it is clear that the greater demand for grains resulting from agrofuel production—along with rising petroleum costs, increased droughts and flooding resulting from climate change, and the lack of adequate public support for agricultural production—

all had major impacts on food prices. Even the recent declines in commodity prices leave the underlying vulnerability of farmers and consumers intact. Each of the causes of food price volatility requires urgent attention to address the impacts on both producers and consumers.

ActionAid works with partners in developing countries to find solutions to the food crisis that respond to poor peoples' needs. In country after country, we hear that farmers want to build on existing knowledge and resources to develop sustainable approaches to food production that use fewer imported petroleum-based inputs and adapt to the impacts of climate change. We hear that they need access to markets, credit, technical assistance, water, and land to increase food production and fulfill their communities' and their nations' right to food.

These issues are all key elements of food sovereignty: each nation's right to determine the best mix of public policies and resources needed to meet their needs for food security and livelihoods. In the past, international financial institutions and donors advised governments to export whatever goods they could produce most efficiently and then to import food and other necessities. As the recent food price crisis made clear, relying solely on market forces to ensure access to food leaves developing country populations in extremely vulnerable situations.

Unfortunately, the skyrocketing demand for agrofuel has thrown a wrench into the deliberations necessary for each country to determine the best way to feed its people. Resources are being diverted to produce agrofuels feedstocks. Vast tracts of land are being redirected to agrofuel production to meet new market opportunities in rich countries. Not only does this reduce local food production, it displaces farmers from their lands, leaving them with fewer and fewer alternatives to ensure their families' livelihoods.

ActionAid believes that it is time to stop the headlong rush to agrofuel production, to assess the impacts to date, and to listen to what farmers and consumers are saying about their needs for food and fuel production. Rich countries should scrap their targets and

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<sup>1</sup>The terms "biofuels" and "agrofuels" are both used to describe ethanol and biodiesel production from agricultural feedstocks. ActionAid prefers the term agrofuel as it more clearly indicates the source of the feedstocks for those fuels.



incentives for agrofuel production. Only after governments from both the North and South fully assess the impacts can they implement a more sustainable approach that balances the needs for food and energy sovereignty around the world.

### **AGROFUEL POLICIES AND PRODUCTION IN THE UNITED STATES**

While climate change is sometimes cited as a justification for the expansion of agrofuel production, in the United States the primary drivers of that policy are really the desire for energy security and the expansion of demand for agricultural production. Both of these goals respond to real problems in the U.S. economy. Current U.S. agrofuel policies, however, only address the symptoms of these problems rather than their underlying causes. In addition, the excessive expansion of agrofuel targets and the resulting optimistic projections for demand have created real threats to food security around the world.

Energy security is a legitimate concern for U.S. policymakers. The United States depends on oil imports to meet 58 percent of its fuel needs. However, this focus on the expansion of agrofuel production to increase the supply of transportation fuel ignores the bigger problem of the unreasonably high demand that U.S. consumers generate for fuel. A real solution to U.S. energy security would include taking steps to reduce fuel consumption by raising vehicle efficiency standards and increasing the availability of public transportation, among other things.

Many U.S. farm organizations embraced the expansion of agrofuels as a new and profitable market for their crops. U.S. agricultural production has gone through a series of upheavals following the

dismantling of supply management, a process that culminated in the 1996 Freedom to Farm Act. After a series of agricultural crises Congress patched together a number of emergency spending measures to avoid the collapse of rural economies. Those stopgap measures were formally constituted into the current subsidy system established by the 2002 Farm Bill and slightly revised in 2008.

Over the past decade there has been a process of concentration of agricultural production that resulted in an overwhelming dominance of larger farmers and agribusinesses in the supply chain. While small-scale farms do still exist in the United States, and many of them rely on farm subsidies to maintain their operations, the incentives structures in the new system favors larger farmers and the expansion of production at prices below their actual cost of production.

The recent run-up in corn and other commodity prices appeared to offer some breathing room for U.S. farmers, but in fact it led them on a roller coaster ride of wild price swings. Corn prices at the Chicago Board of Trade (the principal global commodity futures exchange) increased from an average of \$2 a bushel in 2006 to nearly \$7 in July 2008. By October, however, those prices had plummeted to less than \$4 a bushel, a level just barely above the cost of production.

This volatility creates real problems for farmers in the United States and abroad, since there is such a long gap between decisions on planting and the harvests that result. Many farmers increased corn production in mid-2008 to take advantage of high prices. Some developing-country governments also dedicated new resources to support local agricultural production to lessen the need for imported foods. Both decisions were based on the expectation that the demand for



agrofuel production, and therefore food prices, would remain high for the foreseeable future. But while the recent decline in prices is good news for meat producers, who rely on corn for animal feed, it creates new stresses on farmers left holding large volumes of crops. Because supply chains from farmers to distributors to retailers are dominated by large corporations that also made decisions based on previous price expectations, it is unclear when—or if—these price reductions will translate into lower food prices for consumers.

Energy security and the advancement of rural livelihoods are important goals in the United States or any other economy. The danger is that current U.S. agrofuel policies do not resolve those problems and will in fact create serious consequences for farmers and their families around the world.

### FOSTERING MARKET VOLATILITY

There are many state and federal programs to support agrofuel production in the United States. Most of that support is for ethanol, which constitutes the vast majority of U.S. agrofuel production. The single most important federal subsidy is the Volumetric Ethanol Excise Tax Credit, a 51 cents-per-gallon tax credit provided to ethanol blenders.<sup>2</sup> The Global Subsidies Initiative estimated total U.S. subsidies for ethanol production at \$7 billion in 2006, about \$4 billion of which resulted from the tax credit.<sup>3</sup>

The United States also charges a 54 cents-per-gallon tariff on ethanol imports. This is designed to offset the tax credit, so that U.S. taxpayers do not subsidize imported ethanol. While this measure limits ethanol imports, the U.S. government allows for duty-free imports of ethanol produced in Caribbean Basin

Initiative (CBI) countries—a group of Caribbean and Central American nations that benefit from U.S. trade preferences. Ethanol produced in other countries but processed in CBI countries is also eligible for duty-free status, which has led to an increase in shipments of “wet” ethanol imports from Brazil to the region, which are then dehydrated and exported duty-free to the United States. As of 2007, imports represented about 6 percent of U.S. ethanol consumption<sup>4</sup>, but most observers expect this figure to rise in the near future.

U.S. energy policies setting targets for agrofuel consumption are probably driving agrofuel production even more than the supply-side support. The 2005 Energy Policy Act set new standards requiring that all gasoline sold in the United States include increasing amounts of renewable fuels, starting with 4 billion gallons in 2006, and increasing to 7.5 billion gallons by 2012. These targets were increased under the 2007 Energy Security and Independence Act, starting with 9 billion gallons in 2008 and increasing to 36 billion gallons by 2012, of which 21 billion gallons must be met by “advanced” agrofuels. The remaining target for advanced agrofuels could be met by other non-corn based ethanol, potentially including imports of sugar-based ethanol.

While primarily designed to increase transportation fuel supplies, the Energy Bill also includes provisions requiring that renewable fuels reduce greenhouse gas emissions. Early studies on corn-based ethanol

<sup>2</sup> This credit will be reduced to 45 cents per gallon starting in 2009 as a result of changes in the 2008 Farm Bill, which also increases the credit to \$1.01 per gallon for advanced, low-carbon agrofuels, including cellulosic ethanol. Note that the tax credit is provided to blenders (retailers) not producers.

<sup>3</sup> “Biofuels—At What Cost? Government support for ethanol and biodiesel in the United States: 2007 Update,” Doug Koplow, Global Subsidies Initiative, October 2007.

<sup>4</sup> “Statement by Renegie on the Ethanol Tariff,” *Biofuels Digest*, August 5, 2008.

concluded that it would produce a modest reduction in emissions. More recent studies incorporating indirect costs, particularly changes in land use and the resulting reduction in carbon sequestration as plant matter is removed from the soil, have concluded that ethanol production could actually produce twice as much greenhouse gas emissions as gasoline, particularly if forest or other sensitive land is converted to crop production for ethanol.<sup>5</sup>

Despite these concerns, the ambitious new targets, along with sharp increases in petroleum prices, contributed to extremely optimistic projections about the profitability of ethanol and other agrofuels. These expectations, in turn, led non-traditional investors to jump into commodity markets, creating volatile swings in prices that have exacerbated the food price crisis around the world. As of November 2008, falling oil prices and tightened credit, coupled with sharp declines in the stock prices for companies that make agrofuel, have created new uncertainties about agrofuels production. Several major ethanol refineries, including VeraSun Energy, which produced 1.64 billion gallons a year of ethanol at 16 US facilities, has filed for bankruptcy protection. VeraSun cited steep losses in speculative markets for corn and reduced access to credit. The company claims it will resume normal operations during the reorganization.<sup>6</sup> VeraSun is not alone. The industry newsletter Biofuels Digest cites continuous declines in share prices for its index of 18 major U.S. agrofuel companies.<sup>7</sup>

Speculative investments in commodity futures markets have partly driven these sharp price swings, and their consequent impacts on world food prices. While those markets have traditionally served to reduce volatility by locking in prices for set time periods, they are becoming a haven for investment capital, particularly for institutional investors.

These investors are not tomorrow's ethanol producers; they are managers of hedge funds, pension funds, sovereign wealth funds, university endowments and investments seeking profitable havens for capital, especially in the wake of the collapse of the U.S. housing market. Traditional speculators increase the liquidity of markets because they both buy and sell commodities. These new "index" speculators only buy, shifting their investments among 25 or so

commodities, so they actually absorb liquidity.<sup>8</sup>

The increased renewable fuels targets and speculation go hand in hand. While certainly part of the growth in speculation results from fund managers seeking new safe havens for their investments, it is also driven by the expectation that the demand for agrofuels will outstrip supply over the next few years. Unfortunately, neither the targets nor the speculative activities take into account the devastating impacts on food prices around the world.

There has been discussion in the U.S. Congress about establishing limits on these speculative investments in petroleum and other commodities. The House of Representatives approved a bill imposing limits on energy and agricultural commodity futures, and the Senate discussed, but failed to approve a similar bill that would have placed restrictions on holdings of oil futures contracts.<sup>9</sup> But perhaps at least part of the answer lies not only in adjustments to arcane financial instruments but in a return to the supply management programs that once served to dampen excesses of supply and demand. Official discussions of the global food price crisis included proposals to establish virtual food reserves in which countries would pledge to release agricultural commodities to respond to shortages or prices spikes.

In any case, the increases in prices and demand in 2007 and early 2008 have led to a significant increase in U.S. corn production. The U.S. Department of Agriculture projects a 12 billion bushel corn harvest in 2008, of which about one third will be directed to ethanol, up from one quarter in 2007. While this production will likely be sufficient to meet the 2008 renewable fuels targets, many observers are skeptical that U.S. production can continue to meet that target in the future, contributing to substantial increases in investment and production of agrofuels and agrofuel feedstocks, particularly in Central and South America. In the absence

<sup>5</sup> "Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change," Timothy Searchinger, et al., *Science Magazine*, February 29, 2008.

<sup>6</sup> "VeraSun Files for Protection," Justin Baer, *Financial Times*, November 2, 2008.

<sup>7</sup> See [www.biofuelsdigest.com](http://www.biofuelsdigest.com).

<sup>8</sup> Testimony of Michael W. Masters, Managing Member/Portfolio Manager Masters Capital Management, LLC before the Committee on Homeland Security and Governmental Affairs United States Senate May 20, 2008. Available at [http://hsgac.senate.gov/public/\\_files/052008Masters.pdf](http://hsgac.senate.gov/public/_files/052008Masters.pdf).

<sup>9</sup> "Credit crisis to spur futures market oversight," Ayesha Rascoe, Reuters, October 30, 2008.

of stronger regulations to ensure that these export opportunities are balanced by domestic needs for food security and rural development, there is a real possibility that an increase in market opportunities would only exacerbate the existing concentration in supply chains, both in developing countries and the United States.

## EUROPEAN DIRECTIVES INCREASE DEMAND

As in the United States, the European Union has promoted agrofuels as a means to achieve energy security. Europe's own oil and gas supplies are decreasing and geopolitical tensions elsewhere in the world have increased the vulnerability of the EU's reliance on imported fuels. The European debate has also emphasized agrofuels as a solution to climate change.

But both arguments are flawed. European produced agrofuels will never make up more than a small proportion of total transport fuel production. Current domestic production meets just three percent of Europe's needs. Because of competing uses for arable land, it is very unlikely that there will be enough land in the EU to meet Europe's anticipated 10 percent target of agrofuels in the total transport fuel mix. Significant quantities would have to be imported, and consequently, energy security will simply not be achieved. As in the United States, lasting solutions to energy security need to start with efforts to lower excessive consumption levels.

Furthermore, a complete life cycle analysis of agrofuels would include such factors as where they are grown, how they are produced and processed, and their means of transport. Such analysis suggests that when direct and indirect land use changes are factored in, as well as the use of agrochemicals in their production, agrofuels, at least those grown with current technologies, will likely increase greenhouse gas emissions and worsen global warming.

Despite these flawed assumptions, the European Union has proceeded with an ambitious set of targets for agrofuel consumption. In 2001, the European Commission came forward with its initial proposals for legislation to increase the use of agrofuels. This culminated, two years later, in the EU "Biofuels

Directive," which required member states to set indicative (i.e. non-mandatory) targets for agrofuels in transport fuels of 2 percent in 2005 and 5.75 percent in 2010.

By 2005, progress had been slow in reaching the 2 percent target; in fact the European Union had only reached half this figure. At the same time, increasing worries over energy insecurity (and rising oil prices), coupled with concerns over climate change, led EU leaders in March 2007 to commit the EU to boost renewable energy use to 20 percent of overall energy consumption by 2020. Included in this commitment was an obligation to raise the EU's share of agrofuels in transport to 10 percent by 2020 on the condition that these fuels would have to meet "sustainability criteria." The pledge was translated into another proposal for legislation ("The Promotion of the Use of Energy from Renewable Sources"), presented by the European Commission in January 2008.

The important distinction here is that the new 10 percent target would be mandatory for all member states. To put this into some sort of context, in 2006, the total EU-27 consumption of agrofuels was 6.03 million tons oil equivalent (mtoe). To meet the 2020 10 percent target, the consumption figure would need to increase fivefold, to some 35 mtoe.

According to the European Commission, some 20 percent of the 2020 target would be imported as agrofuel feedstock<sup>10</sup> although this is probably a gross underestimate.<sup>11</sup> But this figure is misleading in another way. The food industry would have to import massive amounts of additional vegetable oils (primarily palm oil) to replace rapeseed oil, the main EU feedstock for biodiesel.

## INCENTIVES AND TRADE RESTRICTIONS

To meet these targets, the European Union has been supporting agrofuels through two important means:

<sup>10</sup> European Commission, 2007. The impact of a 10% minimum obligation for biofuel use in the EU-27 in 2020 on agricultural markets. Brussels, April 30, 2007.

<sup>11</sup> The EC's figures need to be treated with caution as they assume that some 25 percent of total consumption levels in 2020 will be met from second-generation agrofuels. This seems very optimistic to ActionAid and consequently, this may have to be met by imports.



■ **Through subsidies and other financial incentives:**

The E.U. gave £4.836 (US\$6.178) billion in 2007, with £1.476 billion allocated to European farmers and £3.360 (US\$4.292) billion to the processing industry. EU member states have received state aid approval for agrofuel tax exemptions as a way of favoring production and consumption in Europe.<sup>12</sup> Allocations to farmers may change as part of the 2008 EU Common Agricultural Policy health check. But assuming current levels of subsidization, to meet the 2020 target, the level of subsidies may have risen to as much as £13.8 (US\$17.6) billion.<sup>13</sup>

- **Through import tariffs:** Because ethanol is classified as an agricultural product, its import duties are high. Biodiesel is classified as a chemical (industrial product) and import duties into the European Union are low. Because of technical standards, palm oil and soy oil cannot currently be used in large quantities in EU biodiesel<sup>14</sup> and consequently low import tariffs have not hindered the development of domestic processing. Conversely, it has helped because more vegetable oils are now being imported into food in vast quantities to replace domestic EU rapeseed oil which is being diverted as the EU's main agrofuel feedstock.

## INCREASING IMPORTS FROM AROUND THE WORLD

The European Union is already importing agrofuel feedstock (estimated at 1.85 billion liters in 2007) as a replacement for domestic food production that has been diverted into agrofuel.

Imports would have to rise significantly to meet the 2020 target, but exact quantities are difficult to predict. This will depend, in part, on the amount of

EU land given over to agrofuels and the development of second generation agrofuels. The development of sustainability criteria may also influence future sources and quantities of agrofuels, both imports and domestic production.

That said, vegetable oil imports will almost certainly rise significantly. Some will be imported as agrofuel feedstock: the European Commission estimates that by 2020, some 27 percent of biodiesel consumption will be met by imports. The current vogue is for the development of biodiesel from jatropha, a drought resistant, high-yielding oil crop that is being increasingly grown in Africa and Asia. But larger quantities of vegetable oils will replace EU rapeseed oil, which is being diverted into EU biodiesel production. Other vegetable oils—particularly palm oil—are being imported as a substitute. An additional 10 billion liters of vegetable oils, much of it from Malaysia and Indonesia, would have to be imported by 2020 to meet the 10 percent target, which requires doubling the current volume of imported agrofuels.<sup>15</sup> This clearly has massive implications for forest areas and peatlands if they are converted to palm oil production.

But by 2020, according to the European Commission, the EU will also import increasing quantities of ethanol. As a result, European investors are looking

<sup>12</sup> European Commission. 2006. "Communication from the Commission to the Council and the European Parliament Report on the Progress Made in the Use of Biofuels and Other Renewable Fuels in the Member States of the European Union." (SEC(2006) 1721). Brussels.

<sup>13</sup> "The EU's Mined Agrofuel Subsidies in 2006 and 2020," Jacques Berthelot, Solidarité, 2008.

<sup>14</sup> Palm oil solidifies in European cold winter temperatures. To date, only small proportions of palm oil can be used in many European motor engines. However, scientific research is ongoing in Asia to rectify this problem to allow larger percentages to be used in biodiesel. This could have an important future impact of the EU biodiesel market, not least because it is a much cheaper feedstock.

<sup>15</sup> "An Inconvenient Truth," Oxfam, 2008, Oxford.



to developing countries for the land and resources necessary to meet energy demands. For example, the commitment made by Latin American and Caribbean (LAC) countries to cooperate on agrofuel development during the 2008 EU-LAC Summit in Lima, saw European companies pledging almost £1 billion for sugarcane expansion in Peru alone.<sup>16,17</sup>

However, it is least developed countries (LDC) and African, Caribbean, and Pacific (ACP) countries, with their privileged trade route to the European market that are favored by foreign investors. Sugar reforms imposed by the European Union on ACP countries in 2006, with a quota system for sugar exports to Europe, have seriously damaged their export market for sugar, forcing the industry to restructure towards energy production in an attempt to survive.<sup>18</sup>

Consequently, the anticipated demand for agrofuels and preferential trade has been the catalyst for foreign investment keen to exploit this potential, particularly in Africa, both for bioethanol (principally sugar cane) and biodiesel (for example, jatropha). Tanzania has recently experienced an invasion of British, German, Dutch, and Swedish agrofuel producers. Comparable experiences can also be found in Mozambique, Ghana, and Ethiopia.<sup>19</sup> However, European investors are not alone in exploiting the agrofuel potential of ACP countries. Brazil, the world's largest exporter of agrofuels, has signed cooperation agreements aimed at the development of agrofuel production in Senegal,<sup>20</sup> Indonesia, Ghana, and Malaysia,<sup>21</sup> and under an agreement with Sweden, much of a Brazilian company's production in Ghana will be exported into Scandinavia.

Despite these ambitious plans, the mounting controversy over the environmental and social consequences of agrofuel production is leading to

new doubts and an official reconsideration of the EU targets. The European Commission presented a proposed directive in January 2008 to replace both the current legislation that sets out measures for promotion of energy production from renewable sources and the non-binding targets for the use of agrofuels in transport of 5.75 percent by December 2010. According to this proposal, each member state is obliged to increase its reliance on renewable energy to boost the EU's renewable fuels share from 8.5 percent to 20 percent by 2020. A mandatory 10 percent target for agrofuels in transport fuel consumption is included within the overall EU objective.

The proposal also requires that agrofuels must meet "sustainability criteria" to count towards the target. However, these are limited and only require that they are not obtained from land of high biodiversity value or high carbon stock and are cultivated to meet EU standards for good agricultural and environmental conditions. Agrofuels are also required to meet minimum levels of greenhouse gas (GHG) savings.

In September 2008, the European Parliament presented its agreed amendments to the proposed directive. The key amendments are:

<sup>16</sup> EU-LAC Investment Forum would attract one billion dollars for Peru, Living in Peru, May 18, 2008. [www.livinginperu.com/news-6474-eu-lac-peru-2008-eu-lac-investment-forum-would-attract-one-billion-dollars-peru](http://www.livinginperu.com/news-6474-eu-lac-peru-2008-eu-lac-investment-forum-would-attract-one-billion-dollars-peru)

<sup>17</sup> Some Latin American and Caribbean countries have preferential access to the EU agrofuel market through the GSP+ scheme. These include Bolivia, Peru, Colombia, Ecuador, Venezuela, Costa Rica, Guatemala, El Salvador, Honduras, and Panama.

<sup>18</sup> Biofuels – S&T Strategic Options for ACP Countries, Maureen Wilson, CTA's Knowledge for Development Programme, April 16, 2007.

<sup>19</sup> Africa Becoming a Biofuel Battleground, Horand Knaup, Global Policy Forum, September 5, 2008.

<sup>20</sup> Brazil and India Join Senegal for Biofuel Production, Wagdy Sawahel, Scidev.net., November 1, 2006.

<sup>21</sup> 'Lula and Indonesian President Pledge Biofuel Cooperation', Agence France Presse, July 11, 2008.

- **Expanding and tightening of sustainability criteria:** To cover all bioenergy, raised thresholds for greenhouse gas savings, and indirect effects from land use change must be taken into account, introduction of social criteria for imported agrofuels to show that International Labor Organization (ILO) labor standards have been respected.
- **Splitting the agrofuel target:** The Parliament proposed a 5 percent target until 2015 (20 percent to be met by other renewable energy sources or second generation agrofuels) and a 10 percent target for 2020 (40 percent of which to be made up from those sources).
- **Inserting a review clause:** The Parliament will review the transport target in 2014 as well as impacts on food security, biodiversity and state of technological advances. The Parliament will also have an oversight role.

As this report goes to print, the European Commission, the EU Council of Ministers (from the 27 Member States), and the European Parliament are currently discussing the proposed amendments. The Commission remains committed to the 10 percent target. The Council as a whole appears to be largely behind them but some member states have different views on the review clause and splitting the target. If a decision can be reached among the Parliament, the Council and the Commission, the proposed Biofuels Directive and targets could be agreed by the end of 2008.

#### **NORTHERN ARGOFUEL DEMANDS SPUR GLOBAL SHIFTS**

These rich country policies to stimulate production and consumption of agrofuels have taken on an increasingly global character. In March 2007, Presidents George W. Bush and Luiz Inácio Lula da Silva signed a Memorandum of Understanding to cooperate on research, promote third country development and production and to establish international standards for agrofuels. In a parallel initiative, former Florida Governor Jeb Bush, Inter-American Development Bank (IDB) President Luis Alberto Moreno, and former Brazilian Agriculture Minister Roberto Rodriguez formed the Inter-American Ethanol Commission, which works to promote public and

private sector investment in ethanol in the Americas.

Shortly after the U.S.-Brazil agreement was reached, China, India, South Africa, and the European Union joined the United States and Brazil to establish the International Biofuels Forum (IBF). The IBF, which is housed at the United Nations Food and Agriculture Organization, is working to establish common technical standards to ensure that agrofuels can be used in engines around the world and to facilitate the trading of ethanol and biodiesel as commodities, with a view to the establishment of a futures market at some point. While national standards for ethanol are relatively consistent among ethanol producing countries, biodiesel standards vary considerably. Those standards would need to be harmonized in order to increase global trade in those commodities. Clarity is also needed on definitions at the World Trade Organization, where ethanol is considered an agricultural commodity, and biodiesel an industrial good, subject to different tariff barriers.

The dramatic increases in agrofuel production in developing countries clearly rest on the assumption that much of it will be exported to the North. The Brazilian government has pushed hard for to redefine trade rules to facilitate exports. Earlier this year, it insisted that agrofuels be classified as environmental goods in the WTO talks, subject to accelerated tariff reductions. In the wake of the recent collapse of those negotiations, it has indicated that it intends to challenge the U.S. ethanol tariffs at the WTO. In a press conference held September 2, Foreign Minister Celso Amorim stated that, "My reading is that we have a very strong case and so there is a good chance we will challenge."<sup>22</sup>

While it is true that ethanol can be produced more efficiently from Brazilian sugar than Kansan corn, that does not answer the question of whether it should be exported to satisfy Northern energy demands. Private investment is also an important factor in the expansion of agrofuel production around the world. In both cases, the critical issue addressed in this paper is the central role of governments in developing public policies to balance the needs for food and fuel and to ensure that the interests of the most vulnerable are protected.

<sup>22</sup> "Brazil Sees WTO Ethanol Case Against U.S. Soon," *Reuters*, Sept. 2, 2008.

In addition to the concerns about the contribution of agrofuel production to food prices and increasing greenhouse gas emissions, farmers are raising concerns about pressures on land rights. The rising demand and investment in agrofuels has contributed to increasing rising land prices and conflicts over land use in many countries. While, under ideal circumstances, rising prices for agricultural goods should contribute to higher incomes for farmers, in many cases, smallholder farmers are simply being pushed aside to make way for large-scale agrofuel production. In a statement issued around the food crisis, the global farm movement Via Campesina stated that:

“Agrofuel production has already started to replace food production. Its ongoing extension will drive even more small scale farmers and indigenous peoples off their lands. Instead of dedicating land and water to food production, these resources are being diverted to produce energy in the form of diesel and ethanol. Today peasants and small farmers, indigenous people, women and men, produce the huge majority of the food consumed worldwide. If not prevented now, agrofuels will occupy our lands and food will become even more scarce and expensive.”<sup>23</sup>

ActionAid is continuing to consult farmers and other partners on this issue. What follows are some initial reports on agrofuel production and its impacts on smallholder farmers in Brazil, Guatemala, Ghana, Mozambique and Senegal.

## COUNTRY CASE STUDIES

### BRAZIL: NEW PRESSURES ON LAND USE AND FOOD PRODUCTION

Brazil was a pioneer in agrofuel development, with national programs dating back to the 1970s, but in recent years it has also become the world leader in agrofuel exports. It is expected to export more than a billion gallons of ethanol in 2008. Brazil is a major producer of both ethanol from sugar and biodiesel from soybeans, castor beans, and other oilseeds. This production has accelerated over the last few years, driven both by rising domestic demand and increasing export opportunities.

Sugar production is increasing rapidly. More than seven million hectares have been planted for the 2007-2008 harvest, up 23 percent over the previous year. The Ministry of Agriculture estimates that land planted for sugar will increase from the present level of 7 million hectares to 13 million hectares by 2015. This production is concentrated in areas near cities and transportation hubs, particularly in the states of Minas Gerais, São Paulo, Mato Grosso do Sul, Goiás, and Maranhão. According to the Brazilian National Bank of Economic and Social Development (BNDES), annual ethanol production for domestic use is expected to increase from the current level of 17.5 billion liters to 24 billion in 2011. Production for export would triple by 2012, to nearly nine billion liters.

In addition to the increase in land used to grow sugar, agrofuel firms are taking over additional land for processing. This process of accelerated mechanization of sugar and ethanol production raises difficult social concerns. Sugar production has been plagued with serious violations of labor rights. While increased mechanization would reduce the number of workers needed and perhaps lower the number of violations, it also means that unemployment will increase among workers who no longer have other options, either as farm laborers or farmers. This, in turn, could exacerbate land concentration, as larger landowners and processing plants buy up more land.

Increasing land prices create additional obstacles to land tenure. From July 2006 to June 2007, average land values in Brazil increased 11.64 percent. The regions with the biggest increases in land values were precisely those experiencing the biggest expansion in sugar cane production: the Southeast (17 percent), the Center-West (12.2 percent) and the South (11.64 percent)<sup>24</sup>. In Araraquara, a rural region of São Paulo, land prices rose 70 percent during in this period. The area planted with sugar cane in São Paulo increased 54 percent between 2002 and 2008.<sup>25</sup>

This process of concentration is displacing other

<sup>23</sup> Via Campesina, “Small Farmers Feed the World, Industrial Agrofuels Fuel Hunger and Poverty,” June 24, 2008.

<sup>24</sup> Aguinaldo Novo. Produção de Etanol Faz Preço da Terra Ter Valorização Histórica no Brasil. O Globo, June 7, 2007.

<sup>25</sup> Área Agrícola Ocupada pela Cana-de-Açúcar no Estado de São Paulo Cresceu 54% desde 2002 e Expansão ainda Continua em SP. Folha de São Paulo, June 1, 2008.



agricultural production, especially for food. Nearly 60 percent of total Brazilian sugar production takes place in the state of São Paulo, using 70 percent of arable lands. The production of beans (a staple of the Brazilian diet) in São Paulo fell 13.2 percent in the summer harvest and 25 percent in the winter harvest below levels in previous years. According to official data from the Brazilian Institute of Geography and Statistics, the area planted with sugarcane increased more than 2.7 million hectares between 1990 and 2006. In the regions experiencing the greatest expansion of sugar production, land planted with beans decreased by 261,000 hectares, and land planted with rice fell by 340,000 hectares, representing 12 and 9 percent respectively of total production of these foods.<sup>26</sup> Brazilian bean prices spiked 123.8 percent in 2007 and milk prices increased 50 percent.<sup>27</sup>

As food production in the South is displaced by sugar production, farmers and ranchers are looking for other options in other parts of the country. While it is true that sugar cane is not directly encroaching on Amazon rainforests in the North, cattle production is shifting to that area, in large part because it has been displaced from the Southeast, the region where most Brazilian sugarcane is produced. Thanks to the increases in land prices, cattle growers are migrating from the Southeast to the center and North of Brazil.

### BRAZIL: CATTLE PRODUCTION BY REGION, 1995-2005 (NUMBER OF ANIMALS)

	1995	2005	INCREASE
Brazil	161,227,938	207,156,696	28.5%
North	19,183,092	41,489,002	116.3%
Central	55,061,299	71,984,504	30.7%
Southeast	37,168,199	38,943,898	4.8%
South	26,641,412	27,770,006	4.2%
Northeast	23,173,936	26,969,286	3.4%

SOURCE: SCHLESINGER, 2008<sup>28</sup>.

Brazil is also a major producer of biodiesel, most of which is produced from soybeans. The country produces about 56 million tons per year of soybeans, planted on more than 21 million hectares. In 2007, Brazil exported 38.5 million tons of soybeans. This figure is expected to rise to 42 million tons in 2008. CONAB, the national food supply agency, estimates that the new proposal to include 5 percent of biodiesel in transport fuels by 2013 will result in as much 3.8 million hectares of land planted with soybeans being diverted to oil production. This increase in the domestic demand for soybean oil, plus the expansion of the external demand for grain and oil, indicate that the land used for soybean production in Brazil will likely continue to grow in the coming years. This expansion could exacerbate the destruction of natural vegetation in the cerrado and the Amazon forest, as well as conflicts over land use and ownership,

<sup>26</sup> Agrocombustíveis e Produção de Alimentos, Ariovaldo Umbelino de Oliveira. *Folha de São Paulo*, April 4, 2008.

<sup>27</sup> Idem. The price rise is due to crop failures and reduction in planting area.

<sup>28</sup> "Lenha Nova para a Velha Fornalha: A Febre dos Agrocombustíveis." Sergio Schlesinger, FASE, Rio de Janeiro, 2008.



conflicts that have already led to the expulsion of hundreds of family farmers and traditional communities.

Although thousands of family farmers produce soybeans, most production is highly concentrated. The Brazilian government is encouraging family farmers to produce other biodiesel feedstocks, including castor beans, sunflower seeds and jatropha. The Ministry of Agrarian Development (MDA) works to diversify biodiesel feedstocks, prioritizing the participation of small-scale farmers. Biodiesel companies purchasing feedstocks from family farmers under the Social Fuel Certification program receive special tax benefits.

According to the MDA, more than 100,000 families are already benefiting from this program, which it hopes will eventually extend to 200,000 family farms. While this program is not without its problems, it does represent an important attempt to ensure that small-holder farmers are not completely left aside in the rush to increase agrofuel production.<sup>29</sup>

### **GUATEMALA: INCREASING LAND CONCENTRATION AND RE-CONCENTRATION**

Like Brazil, Guatemala has been producing ethanol from sugarcane for decades, starting in 1983. Over the last five years, however, the cultivation of both sugarcane and African palm (both for biodiesel and to replace EU edible oils that have been diverted to biodiesel production) has dramatically expanded. The government and international financial institutions have supported this process without developing adequate safeguards to address the potential implications of this new land use and land concentration for rural populations.

According to the National Statistics Institute, as of

2003, there were 49 farms with a total of 31,185 hectares producing African palm. By 2007, the area under cultivation had more than doubled to 65,340 hectares. Calculations by ActionAid Guatemala,<sup>30</sup> based on publicly available land use surveys, estimate that by June 2008 this figure had risen to 83,385 hectares.

Land under cultivation for sugar has also increased, from 188,775 hectares in 2003 to 260,896 hectares in 2007. Much of this production is destined to the U.S. market (under preferential access granted under the Caribbean Basin Initiative and the Central American Free Trade Agreement), both as sugar and ethanol. As of 2006, Guatemala produced 49 million liters of ethanol.<sup>31</sup>

Guatemala is not a large country with abundant idle land. Such changes in land use mean that choices have been made—choices between land destined for food or fuel and choices between smaller and larger landholders. The expansion of land under cultivation for sugarcane and palm oil has resulted in both concentration of land ownership (when smaller scale farmers sell their lands to larger landowners) and “re-concentration” (when already large plantations are sold and consolidated into even larger landholdings). Both processes affect rural livelihoods and food security.

The process of concentration of landholdings is especially evident in the municipalities of Ixcán, Chisec, Fray Bartolomé de las Casas, and Sayaxché.

<sup>29</sup> Biocamp É a Nova Empresa com Selo Combustível Social. MDA, February 26, 2008, [www.mda.gov.br/saf](http://www.mda.gov.br/saf).

<sup>30</sup> This section is drawn from *Plantations for Agrofuels and Loss of Lands for the Production of Food in Guatemala*, Laura Hurtado, ActionAid Guatemala, August 2008.

<sup>31</sup> <http://www.ethanolrfa.org/industry/statistics/>

In these areas, investors are buying land from individual owners and communities. Most of these small-scale owners are peasant families who had gained land titles after the signing of the Peace Accords in 1996.

The case of the San Román farm, located in the Sayaxché municipality in Petén is illustrative. Land titles were granted to 2,113 families between 1999 and 2001. Immediately after the deeds were delivered, an intense process of land purchases began. In many cases, community members allege, land buyers were present at the events where deeds were delivered to beneficiaries, offering them cash in exchange for their land. While these families had been granted land titles, in most cases they did not receive the credit, technical assistance or other public support they would need to actually produce crops. As of June 2008, some 60 percent of those farms had been sold.

Women have been hit especially hard by these changes. While the law specifies that both husbands and wives should sign any land sales, in practice women are often left out of those decisions. In July 2008, women organized in the Asociación Qana' Tzuultaq'a, representing 18 communities in Alta Verapaz, met with the head of the Fund for Lands (Fondo de Tierras, the agency responsible for land titling) to insist that the agency reinstate its gender policy and that it take actions to slow down the rapid and often pressured land sales.<sup>32</sup>

In addition to the process of land concentration, many large plantation owners have been selling their lands to investors in a process of "re-concentration." Landowners in Fray Bartolomé Las Casa in Alta Verapaz have started to reorganize their farms before selling them to agrofuel investors. As a result, some former tenant farmers who had been allowed to use small parcels to cultivate food for household use have been displaced.

This consolidation of land ownership could have serious consequences for food security. Many of these farms had previously produced a variety of corn, rice, meat, and dairy products for the domestic market. Even in cases in which the small-scale farmers had negotiated monetary compensation for their lands, their families' nutritional status could be compromised if they are unable to continue with the

variety of farming, crafts, and gathering of food from forests that previously ensured diversified sources of livelihoods.

## **GHANA: RACING FORWARD WITHOUT ADEQUATE CONSULTATION**

Enthusiasm for the agrofuel industry has been building for several years in Ghana. Entrepreneur Onua Amoah started with efforts to popularize the use of jatropha for biodiesel, which sparked considerable public interest in the crop as an alternative energy source. In its Strategic National Energy Plan for 2006-2020 the government, recognizing the over-reliance on wood as a local energy source, especially its threat to forest cover, laid out a new set of policies to diversify energy sources and accelerate the development of renewable energy. The plan set ambitious targets to use 10 percent renewable fuels for electricity and 10 percent in transportation fuels by 2020. Unfortunately, no guidelines were set about how that expansion would take place or how this newfound enthusiasm should be tempered to address the potential impacts on local economies, the environment, and food security.

The development of clear public policies has not kept up with rising international demand and new expectations of profitable export markets. There have been considerable new investments to expand jatropha cultivation throughout the country. Some of these projects have been funded by NGOs or international agencies such as the United Nations Development Program, but there has also been a significant increase in European investment in the sector.

Many community members told ActionAid that they feel that there should have been more consultation before biofuels projects were allowed to go ahead. In some cases, communities are losing access to lands that have been classified as "marginal." In others, the lack of adequate consultation procedures has contributed to conflicts among community members, as the bonds that once held these communities together are strained by the incursion of large plantations.

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<sup>32</sup> "Ya No Queremos Que Nos Usen; Tenemos Derecho," Co-Propietarias de la Tierra en Chisec Exigen Escrituras al Fondo de Tierras, July 14, 2008.

ActionAid interviewed villagers in Gonja land, in northern Ghana, to better understand their perspectives on the current rush to expand agrofuels. In most cases, local people claimed that they simply did not know what was being planned in their areas. In Makango, where land will be converted to sugarcane for ethanol production, people said they had been told that investors were interested in marsh lands that are not suitable for crop production. They had heard some indications that the project should generate local employment, but they did not know any details about the nature or numbers of those jobs.

They did know that the marsh lands slated for agrofuel crops are the breeding grounds for fish during periodic floods and thus support thriving fishing communities along the river. They raised questions about how fishing would be affected by the increased crop production and the proposed establishment of an ethanol refinery along the river.

In Alipe, where investors plan to expand jatropha production for biodiesel, community members were concerned about the loss of local sheanut trees. Sheanuts are used to produce shea butter, which is a valuable commodity used internationally in soaps and cosmetics and locally for pomade and cooking. They had initially been enthusiastic about the possibilities for new jobs on the plantation until the trees started coming down. These trees are a major source of income for women during the rainy season. Community member Sanatu Yaw explained,

“The sheanuts that I am able to pick during the year helps me to have my children in school, to buy cloth and also to supplement the household’s food needs when the harvest from my husband’s farm runs out. But this year I could not get much because of the trees that have been cut. Now they have destroyed the trees and so we have lost a good source of income forever, yet we have not been paid anything as compensation. That is why I confronted the ‘white man’ at the meeting in Kusawgu.”

Alipe villagers raised their worries about the destruction of the sheanut trees and the loss of grazing lands for their animals with local officials. In that case, community members managed to halt the project. They are insisting on negotiations to

determine the best course of action. There is a proposal to provide women jobs and to support other income-generating activities. Nevertheless their traditional livelihoods have been changed forever.

These cases underline the need for governments to ensure that local communities are fully informed and consulted at the beginning of the projects to allow for a full discussion of all of the potential consequences of the projects. Local people say they were told about the prospects for job creation, but they claim that they did not understand the possible loss of livelihoods from the diversion of their lands to these new uses. In some cases, traditional leaders, who actually have the authority to determine new land uses, claim that they were not adequately informed. Even now that negotiations are underway, community members are confronted with a dizzying array of technical proposals on lease options and vague descriptions of which lands would actually be used for such a project. While it may be that a way forward can be found, these cases point to the urgency of establishing clear and inclusive procedures to ensure that affected communities can either negotiate such deals on their own terms, or refuse projects that may have negative effects on the community’s development.

## **MOZAMBIQUE: PRODUCTION EXPANDS BEFORE POLICIES ARE IN PLACE**

In Mozambique, the political debate on agrofuels has advanced rapidly since Brazilian President Luiz Inácio Lula da Silva’s visit in 2005. The government’s initial plans called for small and medium-scale production carried out primarily by family farmers. As in the Brazilian biodiesel program, companies would then purchase feedstocks from those farmers in order to increase rural incomes. The central stated objective was to reduce domestic dependence on fuel imports, while also increasing local food production.

Since then, however, there has been a sharp increase in private investment, especially for sugar production. This has resulted in pressure to annex local lands for agrofuel production. As of June 2008, a total of 21 new agrofuel production projects had been presented to the government for approval, including several new investment projects from Italy, Brazil, and South Africa.



This increase in investment projects has not been matched with appropriate development of local land, water, forest or biodiversity policies to ensure to balance the possible economic opportunities with the needs of current and future populations. In many cases, efforts to increase jatropha or sugar production for ethanol have not been accompanied by plans to market or process the feedstocks.

Local NGOs, including the ROSA network (Rede de ONGs/Associações em Serviço da Agricultura e Segurança Alimentar), have expressed their concerns that agrofuel development is accelerating without the necessary consultations with local communities or the regulations to ensure that those communities benefits from the production. ROSA is insisting on the formation of a national framework to monitor the impacts of agrofuels on food production, and to promote policies and programs that do not undermine local farmers and ecosystems.

### **SENEGAL: GOVERNMENTAL ENTHUSIASM OUTSTRIPS UNDERSTANDING OF CONSEQUENCES**

The Senegalese government has launched an ambitious program to increase agrofuel production in the country and in the region. As in the European Union and United States, energy security is cited as the driving force leading this change. It is ironic, however, that this push to expand agricultural production for fuel is advancing so quickly in a country that experienced a series of public demonstrations and even riots about food prices earlier this year.

In 2006, President Abdoulaye Wade announced the formation of the Pan-African Non-Petroleum Producers Association (PANPP), which includes

Benin, Burkina Faso, Guinea, Guinea Bissau, Ivory Coast, Mali, Morocco, Madagascar, Niger, and Togo. Wade asserted that, “In sub-Saharan Africa, in particular, the oil crisis is not a vexing cost crunch... It is an unfolding catastrophe that could set back efforts to reduce poverty and promote economic development for years.” The solution, he proposed, was for African nations to “follow in Brazil’s footsteps” to promote agrofuels and other alternative energy sources.<sup>33</sup>

Since then, in addition to continuing meetings of the PANPP and other efforts to advance regional coordination, the Senegalese government has initiated a program to dramatically increase national biodiesel production. In 2007, it began the Jatropha National Production Program, with a goal of increasing the land used for jatropha production for biodiesel to 321,000 hectares by 2012.

Within that framework, the government has requested that each rural community allocate a portion of its land for jatropha production. In the Tambacounda Region, one of the few areas with large natural forests, 23,500 hectares were allocated for jatropha, compared to 7,200 for food production.<sup>34</sup>

The government’s drive to increase production is leading to increases in foreign investment. In the Anambe Valley, for example, production is shifting from rice and vegetable production to jatropha. ActionAid believes that consultations between the government and foreign investors who are interested in agrofuel production should also include representatives of local communities.

<sup>33</sup> "Africa Over a Barrel," Abdoulaye Wade, Washington Post, October 28, 2006.

<sup>34</sup> Statistics from the Regional Directorates for Rural Development.



The shift to agrofuel production could have serious consequences for those communities. In some areas, forests are being cleared to make way for jatropha production. Forests are important sources of livelihoods for many communities. In the Bignona area, for example, the Forestry Department estimates that clearing forests to create jatropha plots could entail a 68 percent reduction in income sources for rural populations. Women are hit especially hard by such changes as they gather firewood, nuts and other forest products to supplement their households' incomes and nutritional needs.

The rush to expand agrofuel production could undermine national food security. Senegal currently depends on imports for more than 60 percent of its food needs. It imports some 600,000 tons of rice a year, compared to 250,000 tons produced locally. Agricultural production has been falling for several years, registering a 16.2 percent decline in 2006, followed by a 4.2 percent decline in 2007.<sup>35</sup>

There is a serious need to bolster local food production to ensure national food security and food sovereignty. ActionAid Senegal interviewed farmers in the North and South of the country. Their priorities were on food production:

- Access to agricultural inputs and equipment
- Access to drinking water and irrigation
- Support to improve seed quality for such crops as rice, groundnuts, millet, and corn
- Access to markets for sweet potatoes, bananas, and other locally produced foods

The shocks created by price volatility in 2008 led to food riots in Dakar. In response to that crisis, the government announced an ambitious program to

increase food production. Wade said, "What I'm hoping for is that the next time I travel down a road, I won't see any more non-cultivated land."<sup>36</sup>

In reality, land is seldom truly unused, or even "marginal," as it serves a multiplicity of environmental, social and livelihoods needs. This only underscores the need to balance the new enthusiasm for agrofuel production with a sober look at the country's food needs, its natural resources and its capacity to expand local food production to achieve food sovereignty.

## CONCLUSION AND RECOMMENDATIONS

Much of the initial euphoria around agrofuels as a solution to the energy crisis, climate change, investment opportunities, and rural livelihoods dissipated to some extent in 2008, especially in the European Union and the United States. Germany recently announced that it would lower its targets for agrofuel use, and there is an intense debate in other European nations about the appropriate role of agrofuels targets and subsidies.

In the United States, Texas Governor Rick Perry petitioned the Environmental Protection Agency to cut the renewable fuels standards because of its impact on his state's livestock and food industries. The Grocery Manufacturers Association and several other food industry trade associations supported his request. While the EPA denied his petition in August, the process served to raise important concerns in the national media.

<sup>35</sup> www.dpee.sn

<sup>36</sup> "Senegal to grow more crops to fight food squeeze," Pascal Fletcher, *Reuters*, April 18, 2008.

<sup>37</sup> "Obama's Energy Policy Linked to Ethanol Interests," Larry Rohter, *International Herald Tribune*, June 23, 2008.

The agrofuels industry was also a subject of debate in the U.S. presidential campaign. President-elect Barack Obama, who lives in the corn-producing state of Illinois, supports agrofuel production to increase energy independence. He has emphasized the importance of transitioning to second-generation agrofuel, and is particularly enthusiastic about switchgrass, a native prairie grass, as a more sustainable fuelstock.<sup>37</sup> Switchgrass, like other cellulosic feedstocks, holds promise but is not yet commercially viable.

The international debate on agrofuels has swung from wild optimism to increasing concerns about its impacts on the environment and food prices. Unfortunately, in an increasingly globalized world, too little of this public debate has focused on the impacts

of the expansion of agrofuel markets on developing country food and land markets. In addition, neither of these positions addresses the underlying problems: the urgent need to advance rural livelihoods and food sovereignty; the over-reliance on oil; and the problems of rich country over-consumption. There is a need for a major shift in agrofuels targets and subsidies, as well as new policies that promote healthy local food production.

To continue on the path laid out by current policies will undoubtedly lead us to an increasing spiral of wild swings in prices, unstable investments, and damaging production, to the detriment of consumers and farmers around the world. Based on the findings in this report, **ActionAid** recommends that:

- The United States and European Union should end current and projected targets and subsidies for agrofuel.
- The United States and European Union should establish enhanced energy efficiency standards so as to reduce their demand for energy.
- The United Nations should establish a commission to examine the impacts of current agrofuel investments and targets on land rights, greenhouse gas emissions, and access to food. This commission should include representatives of affected sectors from civil society, including family farm, rural workers' organizations, environmental, women's, and consumers' organizations.
- The United Nations should advance with efforts to establish a system of international commodity reserves to reduce food price volatility.
- National governments should establish mechanisms to ensure that local communities are fully consulted on the potential impacts of agrofuel investments on their rights to land, livelihoods and food. No investment proposal should be approved without their informed consent.
- Women must be consulted and approve any land sales involving family or communal lands. Women's sources of livelihood should not be destroyed, and women must be consulted on alternative use of natural resources in their communities, as they are the people who bear the blunt of destruction of these natural resources. In many of the least-developed nations, the land may not belong to women and they therefore may not have title rights to it but in many cases they must travel long distances in search of water or fuel wood, and they collect nuts and wild fruits from the forest.
- Governments should establish regional and national policy frameworks to ensure that efforts to diversify energy supplies do not undermine local food production or the right to food.
- Governments should impose a moratorium on the expansion of agrofuel production until the United Nations commission reports on the full range of impacts and governments establish the necessary protections on community rights, women's rights, and the right to food.

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ActionAid International  
Postnet Suite 248  
Private Bag X31  
Saxonwold 2132  
Johannesburg  
South Africa  
Tel: +27 11 731 4500  
Fax: +27 11 880 8082  
[www.actionaid.org](http://www.actionaid.org)

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