



## Land Conversion and Agrofuel Plantations in Mindanao: Promises and Uncertainties

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**ABSTRACT:** As a signatory to the Kyoto Protocol, the Philippines enacted the Biofuels Act of 2006 (RA 9367). Signed into law in January 2007, it aims for the phasing out of harmful gasoline additives and/or oxygenates, and the mandatory use of biofuels with one percent biodiesel blend and five percent bioethanol blend for all diesel and gasoline fuels, respectively. This policy has led to frenzied development of biofuel plantations, particularly sugarcane, cassava, and sweet sorghum for bioethanol production, and coconut, oil palm, and *jatropha* for production of biodiesel. Mindanao has been identified as a major contributor in fulfilling the Philippine government's biofuel targets. The island's vast agricultural lands are thus giving way to monocrop oil plantations.

**KEYWORDS:** land conversion · Mindanao · biofuels · land grabbing

### INTRODUCTION

Over the last twenty-five years, various predictions and warnings have been made on the shrinking supply of fossil fuels, particularly coal, oil, and natural gas, urging the development of alternative energy sources. Climatologists have likewise forewarned of the alarming increase in temperature due to burning of fossil fuels and deforestation that have significantly contributed to greenhouse gas (GHG) emissions and global warming. As a response to the problem, the United Nations Framework Convention on Climate Change was adopted in 1992, with 194 signatory countries encouraged to “stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system.” This was complemented by the 1997 Kyoto Protocol signed by 190 countries. Enforced in February 2005, it sets binding targets for thirty-seven countries and the European Union for reducing GHG<sup>1</sup> emissions by 5.2 percent against 1990 levels over a five-year period from 2008 to 2012.

With increased policy-support measures to mitigate climate change and global warming, production of biofuels<sup>2</sup> has tripled since 2000, and is projected to further double within the next decade (FAO 2009). Studies show that biofuels can reduce GHG emissions by 10-90 percent, depending on production technology and feedstock. With this premise, Organisation for Economic Co-operation and Development (OECD) countries have thus “invaded” Third World countries in Africa, South America, and Asia for massive cultivation of crops such as oil palm, *jatropha*, sugarcane, and cassava for fuels. Transnational companies and governments from the North have entered into agreements with Third World governments for lease and conversion of lands planted with food crops, nonfood crops, or forest trees for the production of monofuel crops such as oil palm, *jatropha*, sugarcane, and other crops for biodiesel or ethanol production. Among civil society movements worldwide, biofuels have been termed agrofuels to dramatize the impact of planting crops for fossil fuel substitution, resulting in the “global landgrab” phenomenon that has displaced small farming households and indigenous peoples in these countries.

### THE PHILIPPINES JOINED THE BANDWAGON FOR AGROFUEL PRODUCTION

As a signatory to the Kyoto Protocol, the Philippines enacted the Biofuels Act of 2006 (RA 9367). Signed into law in January 2007, it aims for the phasing out of harmful gasoline additives and/or oxygenates, and mandatory use of biofuels with 1 percent biodiesel blend and 5 percent bioethanol blend for all diesel and gasoline fuels, respectively. This policy has led to a frenzied development of biofuel plantations, particularly sugarcane, cassava, and sweet sorghum for bioethanol production; and coconut, oil palm, and *jatropha* for biodiesel production.

According to the Department of Agriculture through the Philippine Agricultural Development and Commercial Corporation, which implements the Biofuels Feedstock Program, to meet the required blend for biodiesel in 2014, 132,000 hectares of *jatropha* are needed to meet the feedstock volume of 660,000 metric tons, while 308,123 hectares of coconut will supply a feedstock volume of 314,286 metric tons. In the case of bioethanol, 118,022 hectares of sugarcane, 372,917 hectares of cassava, and 107,400 hectares of sweet sorghum

need to be developed to produce 7.7 million metric tons of sugarcane, 2.9 million metric tons of cassava, and 10.7 metric tons of sweet sorghum by 2014 (PADCC 2009).

## SWEET TALK AND PROMISES OF BENEFITS FOR MINDANAO COMMUNITIES

Mindanao, dubbed as the country's food basket, has ironically been identified likewise as a major contributor in fulfilling the Philippine government's biofuel targets. The island's vast agricultural lands are, thus, giving way to monocrop oil plantations. Based on the research of the Alternate Forum for Research in Mindanao, Inc. (AFRIM) on agrofuels expansion in Mindanao, as of December 2009 there were at least 310,000 hectares of land registered by the Department of Agriculture for agrofuel cultivation under eight companies in the island. This is part of the two million hectares of land for agribusiness targeted under the Medium-Term Philippine Development Plan for 2004-2010.

The companies with the largest targeted hectarage in the island are Abundant Biofuels Corp. and Eco-Global Bio Oil, each with one hundred thousand hectares to be planted with *jatropha* in Regions 10 and 12, respectively. The Philippine National Oil Company-Alternative Fuels Corporation (PNOC-AFC) originally identified 160,000 hectares to be planted with *jatropha* in Region 10 but has reduced its target area to forty thousand hectares.

Given the neoliberal policies of government and its neglect of the agriculture sector (Africa 2005), local governments, small farmers, and indigenous communities alike have been lured into agrofuel production as a way out of poverty and toward economic prosperity.

Between 2008 and 2009, AFRIM conducted case studies in communities that have entered into agreements with agrofuel investor-companies. The following are some of the promised benefits made by these companies to would-be cultivators:

- *High economic returns.* Agrofuel cultivation is claimed to generate far greater income for farmers than their current crops.
- *Problem-free production and market access.* Agrofuel production does not require much attention and water, and can be grown in marginal areas. Investors also

commit to absorb whatever volume of crops that farmers will produce.

- *Provision of production support and delivery of social services.* Investors will provide free seedlings and technical assistance, including basic services for communities hosting agrofuel production.
- *Nondisplacement of food crops.* Marginal areas and denuded hillsides will be cultivated for agrofuel farming, thus conversion of areas for food production will not be necessary.

### ALARMING TRUTHS AND UNCERTAINTIES

As the number one rice-importing country in Asia that produces 85 percent of its rice requirements while importing the remaining 15 percent, it is quite ironic and depressing to note that the Philippine government could afford to commit around 1.2 million hectares of land for growing *jatropha*, not to mention the twenty thousand hectares set aside for ethanol-production ventures with Spain, and some one million hectares for China's agrofuel needs (SEARICE 2008; AFRIM 2009). It is even more disappointing to learn that the government could make these commitments to foreign countries and investors while falling short in lands for rice production and food security of its people.

Besides the issue of insufficient land area for food production, cultivation of agrofuel crops requires huge amount of water, thus it threatens food crop production. Comparing water requirement of rice and *jatropha*, studies indicate that while it takes only five hundred liters to one thousand liters of water to produce one kilogram of rough unmilled rice (Boumann 2009), *jatropha* requires an average of twenty thousand liters of water for every liter of biodiesel produced (Gerbens-Leenes, Hoekstra, and van der Meer 2009). The study of Gerbens-Leenes, Hoekstra, and van der Meer also reported that *jatropha* requires five times as much water per unit of energy as sugarcane and corn and about ten times as much as sugar beet. Hence, the growth and yield of *jatropha* planted in marginal soils are expected to be low.

Targeting ancestral domains of indigenous peoples for plantation expansion further poses threats to biodiversities in forestlands,

farmlands, marine and freshwater ecosystems, while diminishing peoples' access and control over these ancestral lands.

The case studies conducted on the impact of agrofuel plantations on affected communities in Mindanao have so far unearthed alarming concerns and uncertainties that negate the sweet talk by these companies and promised benefits from these plantations.

In the case of the *jatropha* plantation developed by Higaonon peoples in Lumbia, Cagayan de Oro, under the PNOCA-AFC, numerous issues have emerged. Based on focus group discussions and key interviews, the major concerns identified include the following: investor's circumvention of the consultation process in getting the indigenous community's free, prior, and informed consent (FPIC); "comfortable deals" made with tribal leaders; unpaid wages; and failure of the company to deliver the promised technical assistance, social preparation, and livelihood-enhancement activities for would-be cultivators. The latter resulted in small farmers' refusal to sign individual growing contracts. Only forty out of eighty members of the Lumbia Farmers Multi-Purpose Cooperative (LUFARMCO) undertook the venture with PNOCA-AFC, providing the project with sixty-four hectares for *jatropha* production.

After just a month of operation however, the project closed down, leaving unpaid-wage claims by the cultivators. Due to the bungled venture, some cultivator-farmers cleared their fields and planted food crops such as cassava, white and yellow corn to supply their families' food needs. Others continued to maintain the *jatropha* trees, and just intercropped them with traditional crops with no assured market. As of 2009, the *jatropha* plants in Lumbia were already bearing fruit but PNOCA-AFC was nowhere in sight.

Meanwhile, the experience of the Kapunungan sa mga Mag-uuma sa Kaanibungan (KASAMAKA) with Nakeen Development Corporation in its oil palm plantation expansion in Impasugong, Bukidnon, shows some state concerns related to agrofuel production. In 2006, the KASAMAKA, together with the local government of Impasugong and the Department of Environment and Natural Resources (DENR), developed a five-year development plan for Barangay Kalabugao, which included oil palm production as a priority project. The plan was approved by the DENR as a requirement for the granting of the Community-Based Forest Management Agreement (CBFMA) applied for by the community, which covers some 2,100 hectares.

Under the CBFMA, KASAMAKA was mandated to develop, manage, and protect the allocated community forest project area. Moreover, it was allowed to enter into agreement with private or government entities for the development of the whole or portion of the CBFM area. During the same year, Nakeen came in and negotiated with KASAMAKA for the use of 1,200 hectares of the CBFMA-covered areas for oil palm production.

The major issues identified include the following:

- *Government's inaccurate land-use data.* Government usually says that only marginal, idle, and/or uncultivated lands are targeted for agrofuel production and expansion, but when the investor-company entered the area, they discovered that the lands identified by the DENR are agricultural lands that are already covered by various tenurial arrangements (e.g., distributed through agrarian reform or under ancestral domain).
- *Government sees oil palm plantation development as a reforestation project.* Oil palm plantations cannot and should not be treated as forests. Oil palm is a monocrop dependent on pesticides, herbicides, and other agrochemicals to thrive. Thus, monocrop plantation development usually results in negative environmental and social impacts such as loss of biodiversity, decreased groundwater reserve, reduced soil fertility, increased erosion and soil compaction, encroachment on indigenous peoples' ancestral lands, and loss of sustainable livelihoods.
- *Farmers and indigenous peoples lose their access and control over their land and other resources due to onerous lease arrangements which they are made to sign by the company.* The land is leased by the company for PHP 6,000–8,000 per hectare for twenty-five years, disallowing them to plant food crops or use the land for other economic ventures. They become mere workers of the company, dependent on wages for their and their families' basic needs. Daily wage per laborer amounts only to PHP 200; women are given work as seasonal workers and paid PHP 80 per day.

- *Crop conversion from food to monocrop oil palm cultivation leads to further marginalization of women who are excluded from regular employment opportunities in the plantation.* The existing unequal power relations between men and women are worsened by lease arrangement and leads to denial of women's land rights.
- *In the long term, oil palm as a monocrop is dependent on chemical-based inputs, which have negative environmental impacts through movement of agrochemicals from farms to aquifers and waterways.* These impacts include destruction of groundwater supply system and marine life, as well as the loss of natural forests and biodiversity related to disrupted water functions.

### IMPERATIVES FOR A BALANCE IN POWER RELATIONS AND A GENUINE CONCERN FOR THE ENVIRONMENT

For land conversion targeting ancestral domains of indigenous communities for agrofuel plantations like the case of the Higaonon tribe in Lumbia, there is a need to reexamine and weigh the economic gains of these business ventures vis-à-vis current and future development needs of affected communities, and its impact on the environment. The lure of economic development pushes small indigenous farmers to shift from food crop to agrofuel crop production, notwithstanding the uncertainties they face from lack of information and onerous contracts offered to them. When investments fail, food security and the livelihood of these small farmers become even more precarious.

The cases reveal a disparity in power relations between wealthy investors and poor farmers. The government's liberal policy supports and promotes investments by granting incentives to companies. Lack of regulation, on the other hand, exposes poor farmers and even the environment to market failures. Left unprotected, they bear the costs of land conversion and collapse of investments.

Given this scenario, it is imperative that the accountability of different actors involved in these business ventures (investors, government agencies, local government units, community and individual growers) should be clearly understood and accepted by all stakeholders. In the case of indigenous communities, adherence to traditional FPIC

processes will ensure that small farmers and indigenous peoples give their informed consent to these projects.

The environmental impact of expansion activities on ancestral domains should also be a priority concern of the government. Agrofuels' impact on the environment must be fully realized by the government, particularly the DENR and the National Commission on Indigenous Peoples, through lessons learned in other countries/regions such as Indonesia, Malaysia, South Asia, and South America. Land-use planning must be based on sustainable environmental management principles that do not compromise the needs of future generations for short-term economic gains.

It is imperative that these concerns be addressed for agrofuel investments to truly benefit indigenous peoples, small farmers, and the environment, not only in Mindanao but also in the rest of the country. ❁

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## NOTES

1. Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulphur dhexafluoride.
2. Biofuels are alternative sources of fuels made from living organisms or from metabolic by-products (organic or food waste products) primarily used for motive, thermal, and power generation with quality specifications in accordance with a country's standards.

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The **ALTERNATE FORUM FOR RESEARCH IN MINDANAO (AFRIM), INC.** is a research and advocacy organization based in Davao City. AFRIM was established in 1979 and officially registered as a nonstock, nonprofit organization with the Securities and Exchange Commission in 1984. AFRIM focuses on in-depth policy research on peace and development concerns confronting the marginalized sectors and communities of Mindanao, upon which its platforms for advocacy and networking, popular education, and capacity building are anchored and developed.