

# **GLOBAL BIOFUEL CROPS: Integrating an agri-energy industry, driving dispossession**

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STEPS Centre, Univ. of Sussex, 24 Jan 2008

(Notes section includes extra information)

# EU policy

- Biofuel crops have been increasingly promoted as a means to reduce greenhouse gas (GHG) emissions, mitigate climate change and enhance energy security – all in the common good.
- EU policy on biofuel crops has set targets for nearly 6% of liquid fuels by 2010 and 10% by 2020. The UK is formalising these targets within its ‘renewable energy’ policy. Germany is setting higher targets than the EU.
- To achieve such targets would require other changes in govt policy and industrial structure – as well as enormous imports from the global South.
- FP7 research priorities link novel GM crops with trade liberalisation for greater import of bioenergy sources.

# Biofuels as sustainable energy?

- Like most recent innovations, biofuels are promoted as 'sustainable' production methods.
- According to the European Commission, biofuels combine agri-economic diversity with greater sustainability, but this term has an unclear meaning:  
'In general, the production of biofuels could provide an opportunity to diversify agricultural activity, reduce dependence on fossil fuels (mainly oil) and contribute to economic growth in a sustainable manner....  
By actively embracing the global trend towards biofuels and by ensuring their sustainable production, the EU can exploit and export its experience and knowledge, while engaging in research to ensure that we remain in the vanguard of technical developments.'  
-- *An EU Strategy for Biofuels*, 2006

Thus the Commission is positioning the EU for competitive advantage in a global market.

# Doubts raised about EU policy

- Crops now used for biofuels have already led to harmful effects in the global South – e.g. higher food and land prices, greater agrichemical usage and dispossession from resources.
- Claims for mitigating climate change have been challenged.  
Savings in carbon emissions depend on specific circumstances and calculation methods.  
Some biofuels could increase GHG emissions.
- For those reasons, doubts have been raised about whether or how the EU targets should be fulfilled.

# EU sustainability criteria?

- There are proposals to regulate imports through sustainability criteria, in order to ensure environmental benefits and to minimise harm in the global South.
- As currently proposed by the European Commission, sustainability criteria would include only some issues, e.g. greenhouse-gas savings and ‘high-biodiversity’ conservation.
- Such criteria are more easily measurable than effects on livelihoods, labour, wider environments, etc. – which remain beyond any criteria which would be plausibly monitored and enforced.
- Despite sharp disagreements, EU and national targets have given a mandate to expand biofuel production (and import), thus stimulating its expansion, regardless of any sustainability criteria .

# Questions for analysis

- What agendas and interests are driving the increase in biofuel production?
- How to understand the emerging harm?  
as negative side-effects of an otherwise beneficial development? or  
as systemic features of an agri-industrial agenda for biofuels?
- How is sustainability understood?
- What prospects for maximising societal benefit and minimising harm? How are these defined?
- What questions for critical research on biofuels?

# Causes of harm?

- Biofuel production is extending agri-industrial systems which have already harmed rural livelihoods and environments.  
Long before biofuel crops, such harm resulted from intensive monocultures of crops, e.g. soya in Argentina: exports to reduce national debt; and oil palm in Indonesia: disputes over sustainability.
- Intensive monocultures depend upon agrichemicals, insecurity of labour or even its elimination.
- Such systems dispossess local populations of control over natural and human resources  
(Paul and Steinbrecher, 2003).

# Similar harm from biofuel crops

- Such effects also result from biofuel crops, especially when produced by agri-industrial systems for a global market (Econexus et al., 2007).  
Small-scale farmers are under threat in many places.
- Tanzania – jatropha shifting from small-scale peasant context to agri-industrial production for export.
- Indonesia – oil palm being expanded and industrialised.
- National policies are driven by pressures of trade & debt.

# Driver: global industrial integration

- Biofuels originated in national policy frameworks, which protected domestic production from foreign competition and even from exports. Governments had regulatory scope to protect local populations and environments.
- These protections are being undermined by global competitive pressures, driven by specific corporate interests.  
An agri-feed-fuel industry is being integrated along horizontal and vertical lines.  
'Bio-refinery' integrates multiple industrial uses of a crop (EuropaBio, 2007).
- Standard products are sought for global commodity exchange, with flexible production of feed, energy or other products from the same harvest.
- Global biofuel production depends upon and stimulates that integration process.

# Global integrated biofuel network (GIBN)

- Bioenergy has recently begun a shift towards a global integrated network, thus deterritorialising relations between production and consumption (Mol, 2007). GIBN has greater transboundary flows, homogenisation of products and processes, an integration with networks of fossil fuels, and thus weaker influence by states.
- In both developed and developing countries, local biofuel production systems and protections are undermined. 'Local marginal farmers become increasingly dependent on powerful global players in the GIBN' – and thus more vulnerable to global market competition.
- Under pressure from civil society, the GIBN may incorporate some efforts to address climate change. However, it is much more difficult to see means to mitigate new social vulnerabilities, given the change in power relations between global traders, developing countries and small-scale farmers (Mol, 2007).

# From old to new enclosures

- Commons: Community producers sustained the use of common lands and maintained them.
- Utilitarian philosophy reconceived land as capital through mechanical and market metaphors; any societal protection would be ‘unnatural interference’ in natural laws of the market (Williams, 1980).  
Through enclosures, communities were dispossessed from control over human and natural resources, instead becoming dependent upon waged labour – wherever employment could be found.
- As a concept, ‘new enclosures’ help to analyse how neoliberal regimes undermine commons, esp. access to or control over land, as well as broader resources.
- Various resources are enclosed by polluting them, privatizing ownership, capitalizing nature, deskilling production, etc.  
Property rights over seeds limit producers’ rights to develop, exchange or sell them.

# GIBN as new enclosures

- Harmful effects of (global) biofuel production and exchange arise from new enclosures.
- The emerging global integrated biofuel network (GIBN) builds upon, depends upon and drives dispossession. Land use is changed –
  - from food to industrial purposes (feed, fuel, etc.),
  - from small-scale producers to plantations,
  - from extensive methods to intensive agricultural usage.The latter methods are facilitated by GM crops, which also privatise resources through patents.
- Competition for land use goes beyond food versus fuel. Conflicts arise between different cultivation methods, ownership structures and societal accountabilities.
- Longer distances of global biofuel markets serve to drive and conceal enclosures.

# What sustainability?

- For the agri-feed-fuel industry (GIBN), sustainability means an input-output efficiency of resource usage for global commodity production and trade.  
GIBN aims to sustain intensive monocultural systems for flexibly accommodating multiple global markets.
- For biofuel crops, official criteria for sustainability focus on parameters that could be plausibly measured and regulated.  
These criteria remain marginal to the industrial strategies and market pressures that drive dispossession.
- For less-intensive agricultures, by contrast, sustainability means relying on local inputs and resources, producing for local markets and sustaining rural livelihoods.
- Different accounts of sustainability imply divergent criteria for social and environmental impacts.

# GM crops as a solution?

- Given the societal and environmental harm from biofuels, 'next-generation' GM crops have been proposed as a means to enhance sustainable crop production and avoid competition for land use.
- This would be done by converting plant (and waste) material more efficiently into energy.
- Promises/hopes for such crops provide an argument to expand biofuels now and thus create economic incentives for those future techno-solutions.
- Such solutions define the problem as inefficient inputs, low-yield plants, inadequate production, etc. – in turn generating competition for land use.
- On the contrary, current inefficiency provides a weak economic incentive for bio-refineries and dispossession. More efficient high-yield crops would provide stronger incentives, especially in the context of global market competition. GM seed contracts control farm processes and impose sanctions for any infringement.

# GM crops: designed for industrial integration and intensification

- Novel GM crops with stacked genes: resistance to insects and/or a herbicide. Designed to facilitate intensive monocultural systems and corporate control.
- GM crops are now being designed to integrate feed & energy uses of a crop, e.g. through high starch, lysine, enzymes to break down lignin, etc.
- Next-generation GM: less plausible, though likewise designed for agri-intensification.
- Hopes for such crops help to defer or avoid responsibility for the societal harm from current biofuels, while preempting alternative futures

# Conclusions

- Biofuels are driven by an agri-feed-fuel industry, seeking consolidation through horizontal and vertical integration, towards more flexible competition in global markets.
- Global market pressures drive dispossession of communities from control over resources, while facilitating their exploitation by multinational capital.
- Government policies promote expansion of biofuel crops – formerly produced for domestic uses, though increasingly for global markets.  
Governments have many incentives (debt, energy security, capital import, etc.) to accommodate global market pressures – and a weaker capacity to limit them.

# Critical research topics on biofuels

- contending agendas for the forms and aims of biofuel crops;
- strategies for integrating a global agri-feed-fuel industry, with consequent enclosures;
- socio-political forces attempting to resist or limit that agenda, while promoting alternatives;
- divergent accounts of sustainability, efficiency and societal futures;
- optimistic assumptions of government policies promoting biofuels; and
- efforts by state (and expert) bodies to mediate the societal conflicts.