



# Food first

*Sustainable agriculture can feed the world.  
It cannot fuel our cars.*

## **Agro-fuel euphoria - a threat for global food security**

A shift of investments and land from food to fuel production puts global food security at a serious risk. Agro-fuels produced from grain, oilseeds and sugarcane - misleadingly called *biofuels* - result in an unsustainable use of land, water and energy: Tropical rain forests are cleared for palm oil plantations; soy production consumes a growing amount of groundwater; the energy balance of the agro-fuels life cycle is often negative. Apart from increased use of pesticides and fertilizers, current global investments in non-food crops lead to the mainstreaming of monocultures and long distance transport instead of sustainable decentralised local solutions. Worldwide, millions of rural people are faced with the threat of being driven off their land without alternative incomes or livelihood.

## **Agro-fuels - a questionable cure against climate change**

Agro-fuels are advertised as solution for the problems related to climate change. However, CO<sub>2</sub> is not the only problem. Green plants reduce CO<sub>2</sub> but intensive farming practices used to grow maize, cereals, sugar cane, palm oil and soy for fuel are fully based on mineral oil. Models suggesting positive energy balances often neglect important factors like the risk of crop losses from climate change due to increasing droughts, floods, erosion and biodiversity, as well as new diseases caused by changing climate conditions. The growing use of nitrogen contributes to massive emissions of nitrous oxide which is a much more powerful greenhouse gas than CO<sub>2</sub>. When the whole lifecycle of agro fuels is considered - from clearing forests to driving cars - emission savings are neutralised by the effects of deforestation, transport and the use of oil-based fertilizers.

## **Agro-fuels accelerate clearing tropical forests and water depletion**

The rapid expansion of palm oil plantations and soy monocultures provoke further clearing of tropical rainforests. The growing demand of industrialised countries for agro-fuels is increasing the problem. In Malaysia, palm oil plantations are responsible for 87% of the deforestation. In Brazil, tropical forests are cleared to produce more soybeans for animal feed and fuel exports. Brazil might reduce its vehicle emissions through the expansion of sugar plantations but, with exports agreed to the US and Europe, it will have to transform 200m ha of dry tropical forests and marshes into fuel-crop land. 80% of the country's greenhouse gases are caused as a result of deforestation. Furthermore, agro-fuels accelerate groundwater depletion. It can take up to 4000 litres of freshwater to produce a litre of agro-fuels.



## **Feeding cars might lead to many more people going hungry worldwide**

Current massive investments and public policies promoting agro-fuel production create growing competition for land and resources at the expense of the poorest people and regions. Prices for cereals have doubled in one year. World grain stocks are at their lowest level in four decades. Harvest losses due to climate change, increased consumption of meat (e.g. in India and China) accentuate this trend. If the EU, the US and Brazil press ahead with current targets to replace mineral oil with agro-fuels, instead of drastically reducing fuel consumption, a growing number of car owners may well be able to buy food and petrol, while the majority of the poor do not even have enough to eat. China has now stopped new agro-fuels projects in order to avoid food shortages.

## **Future agro-fuel generations can make things worse**

The emerging unsustainable effects of the agro-fuel project have shifted expectations to future generations of non-food crops and biomass processing. It is expected that other sources, such as fast growing trees, *miscanthus* grass or "any organic material", will be converted into fuel, breaking down cellulose into sugar and ethanol, on a wider scale. Some proponents expect progress using genetically modified organisms including seeds, plants and enzymes for processing the biomass. Most of these plants and trees are invasive and perennial and can provoke widespread contamination of natural species. Further loss of biodiversity through monocultures can be expected. The agro-fuels industry now points at the second and even third generation of agro-fuels promising a better energy balance. However, there is little evidence that the negative environmental and social side effects of these new crops and processing technologies will be diminished.

## **Sustainable food production reduces pressure on other people's land**

There is no land surplus in a sustainable European food system. The EU is the world's biggest net-importer of food and feed. It uses many millions of hectares abroad and enormous amounts of ground water and mineral oil in order to provide the currently-consumed feed for meat production and food for its citizens. In order to reduce this social and ecological footprint in developing countries and to contribute to reducing the effects of climate change, the EU must improve energy efficiency in its own food system shifting from extremely input-dependant agriculture, processing and transport to a self-energising system that recycles organic waste material, re-integrates crop and livestock production and combines modern renewable energy systems (solar, geothermic, biogas, wind, heating and electric power) on a local level.

## **Public support only for sustainable and integrated farming systems**

Biomass, biogas and agro-fuels can contribute to more energy efficiency and action against climate change, as part of a sustainable food and fuel system, if food security and biodiversity conservation can be guaranteed in the first place. This can only be achieved if any public support for energy crops is exclusively available for integrated and sustainable food and farming systems on a decentralised level. A more locally- and regionally-based food system will reduce oil consumption and the growing food supply risks. Organic production uses significantly less mineral oil and does not make use of chemicals or GMOs. In organic farming, the protection of biodiversity, soil and water resources is included.



## **Towards a better balance between plant, meat and fuel production**

Long term food security for a growing world population requires better supply management including grain, animal feed and fuels based on plant production. Current meat production and consumption in wealthy countries is highly inefficient and unsustainable with regards to ensuring a better global distribution of wholesome food and renewable energy resources. Up to 10 plant-derived calories are needed to produce 1 meat-derived calorie. Factory farming based on imported feedstuff not only consumes billions of euros in subsidies, but also contributes substantially to greenhouse gases like methane. The agro-fuels boom adds to this vicious circle, as it maintains the same consumptive and wasteful approach to energy consumption. The EU must take the lead putting European and global food security first on the reform agenda and encourage farmers to combine sustainable crop and animal production with local renewable energies.

## **Decentralised food and energy systems can prevent conflicts over scarce resources**

Only a drastic reduction of wasteful energy and food consumption in industrialised countries and rising economies will contribute to a fair share of food and energy between North and South and succeed in preventing conflicts on access to energy, water and food. North America and Europe now consume 65 % of the world's mineral oil and 40% of the world's food with 19 % of the world population. It is evident that, with dwindling oil and water reserves and a growing concentration of market power of globally operating companies, national governments will have little influence on food and energy security if they do not establish a decentralised framework of food and energy production. There are many good practices and experiences available in Europe and abroad of highly efficient local renewable energy and food systems which need to be supported through integrated rural and urban development programmes.

## **Food security impact assessment and mandatory certification for agro-fuels**

The EU Commission should make a full food security and environmental impact assessment before imposing any compulsory agro-fuels target in its renewable energy strategy. This assessment should include the necessary amount and production conditions of imported products, especially from tropical regions. Imports should fall under *qualified market access provisions*, which apply sustainability criteria as a condition for market access. Instruments to regulate market access should imply import preferences or levies for meeting or missing these standards. Resources from levies should be turned into rural development support measures in the countries of origin. Tax incentives, direct aid and multilateral funding (such as the clean development mechanism under the Kyoto Protocol) should be linked to sustainability criteria and guaranteed through an agro-fuels certification scheme.

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