

## **The Promotion of Biofuels is Detrimental to Biodiversity**

A paper by the European Environmental Bureau

The upcoming Commission Proposal for the mandatory replacement of fossil fuels through biofuels and for national tax exemptions to promote them, makes no economic nor ecological sense. It produces too little climate or CO<sub>2</sub> benefits, it causes further destruction of nature and imposes high costs on taxpayers via agricultural subsidies, without producing benefits. European agricultural land can be put to better use producing fodder and food, rather than environmentally costly fuel. This is the opinion of the EEB on the Proposal for a Directive of the European Parliament and of the Council on the Promotion of the Use of Biofuels for Transport, which is due to come out this week.

Environmental NGOs have not been consulted in the preparation phase of the Commission Proposal.

Please receive, in short, our arguments **against** such a measure:

Biofuels:

1. Are destructive for biodiversity
2. Do little to save CO<sub>2</sub>,
3. Make no economic sense
4. May miss their target of supporting EU farmers
5. Are no major contribution to the reduction of noxious emissions
6. Are not a sustainable element for the reform of the Common Agricultural Policy

### **Background:**

In principle, there are different sources available for biofuels. The most important ones are agricultural products grown for that purpose, as well as waste from the food industry, and perhaps also wood byproducts in the future. Biogas, which is produced from byproducts of wood or from waste, can be used in dedicated vehicles as motoring fuel. However, it is expected that most of the biofuels will effectively come from agriculture. In particular, oils from oleaginous seeds are meant to replace diesel. Bioethanol made from sugar or starch-holding crops can be added to gasoline. As we will show in this paper, the environmental impact of production of biofuels in agriculture leads to the conclusion that it is by no means a good idea.

The Life Cycle Assessment (LCA) of biogas would have a more positive net result for the environment. Until now, biogas only accounts for a very small percentage of the consumption of biofuels (only in vehicles that burn gas instead of liquid fuel). Liquid fuel production is possible as well, derived from wood products or biomass (ligno-cellulosic or thermo-chemical conversion), but it is uncertain that it will be economically competitive with the other processes. So far there is no production site in operation.

Research into biomass production and how it can be managed in a sustainable way would be much more promising than insisting on the controversial option of biofuels for transport. The EEB thinks that concerning biomass from waste and wood products, it is more logical to concentrate on use in combined heat and power production (co-generation) and on other energy uses where solid fuels can be used.

## **1. Biofuel Production Puts Biodiversity at Risk**

The continuation of intensive agriculture – also on set-aside land - will continue the pressure being put on natural ecosystems. This goes directly against EU policy, as stated in the Biodiversity Action Plan for agriculture, but also as stated in the Commission's Sustainable Development Strategy.

Intensive agriculture is one of the most important causes for decline of plants and animal species. The pressure exerted through the disturbance of soil, with its accompanying nitrates loss and water extraction, the disturbance of breeding places and natural plant societies, and the use of pesticides, all contribute to the loss of biodiversity. In particular, the use of pesticides targeted to protect cultural species from all that is regarded as "competition", have taken their toll on biodiversity.

Above all, the reduced (very small) number of agricultural species which now prevail in our land cover has created monotonous living conditions and impoverished our landscapes. Once extinct, species will never return and are no longer available for the maintenance of the complex network that guarantees the stability of our ecosystems.

Environmental NGOs have time and again put forward the need to lift the pressure from intensive agriculture and have welcomed any attempt made in this direction, such as the subsidies on land not used for food production; i.e., on set-aside land. Set-aside measures do not allow for any production of crops intended for human consumption whereas non-food production is allowed.

Set-aside generally has mild positive effects on the environment, for instance by providing nesting and feeding places for birds. Therefore there should be sound arguments for using set-aside land for production (for instance for fodder production for EU-consumption or organic production which cause much less environmental damage). If there is no such argument, the land should best be left fallow.

Using this land for the very crops whose abundance have caused much of our loss of biodiversity in the past, for production of motor fuels, destroys the ecological value of set-aside measures.

## **2. Climate change potential**

The energy and CO<sub>2</sub> balance of biofuel production is by no means so positive. The use of biofuels produces little or no climate or CO<sub>2</sub> benefits. The production of biofuels is heavily dependent on the input of fossil fuels, for the transport fuels to

drive the machinery involved in working the soil, ploughing, tilling, harvesting and processing, for the production of agrochemicals as pesticides and fertilisers, and for electricity for the production process of the biofuels themselves.

Many life cycle analyses have been conducted and they came to the conclusion that the climate change potential of the emitted gases was very often negative or neutral right away. If it was sometimes positive as, for example, in the case of oil crops<sup>i</sup>, the resulting gain was too small that it was not worth spending much money on it<sup>ii</sup>. The Commission Proposal<sup>iii</sup> mentions this itself in its Memorandum. Other measures would be much more advantageous from a cost-benefit point of view, such as the promotion of public transport, the promotion of smaller vehicles, or the improvement of vehicle technology.

The Study on Fuel Technology prepared in the framework of the Auto-Oil Programme II<sup>iv</sup> contained an extensive part on Alternative Fuels. The Expert Working Group accompanying the Study had remained divided about the results presented by Professor Arcoumanis and had criticised him that he had relied too much on one source of information.

### **3. Economic benefit**

The scheme imposes the consumption of biofuels regardless of their price, and leaves it up to Member States to make this palatable to consumers by granting tax breaks. The Memorandum states that the price of biodiesel is twice as high as that of fossil diesel. The consumer will thus have to pay the difference either by his motoring bill or by his tax bill.

Biofuels continue to depend on subsidies for

- set-aside land
- setting up refining structures
- research for its use and improvement
- tax breaks.

The EC's Sustainable Development Strategy (SDS) states that it wants to "remove subsidies that encourage wasteful use of natural resources". The tax exemption for biofuels for transport is exactly that. It cannot be the Commission's intention to create more environmentally damaging subsidies!

### **4. Imported biofuels**

The very raw materials used for production of bio-fuels are also imported, from Malaysia in the case of palm oil which can serve as raw material for bio-diesel, and in the case of bio-ethanol from US, Canada, Thailand, Brazil, etc. According to the WTO Agreement, these imports enjoy equal treatment in the EU market to products from the EU. Refiners would buy biofuels where they are cheapest, and that is not always likely to be in the EU. The tax breaks would then be to the benefit of these imports. So it is by no means certain that EU farmers will enjoy the benefit of being offered a new outlet.

## **5. Fuel quality and engine emissions**

In addition, whilst bio-diesel may meet the exhaust limit values for motor vehicles of EURO 1 and 2 (the EU legislation on exhaust limit values), concerning the fuel qualities which must accompany existing and enable improved engine and pollution abatement technologies, however, it is questionable whether it will be able to meet the values of EURO 3<sup>v</sup>, and will definitely not meet EURO 4.

## **6. Biofuels in the context of Common Agricultural Policy**

The promotion of the production of biofuels on set-aside land means the continuation of intensive agriculture, with its well-known impact on the environment (nitrate and pesticide pollution of water, loss of biodiversity, water extraction). If the objective is to make agriculture more sustainable, as stated in the Commission's Sustainable Development Strategy and if set-aside land were to be used at all for production, it should be used for organic production or else be left fallow.

In May, the Agricultural Council agreed in the light of the BSE crisis to allow organic production of Leguminosae, i.e. fodder crops like beans, luzerne, peas etc. on set-aside land.

The only other acceptable way of using set-aside land is to start growing fodder (by preference organic, but also environmentally-friendly conventional) meant specifically for livestock in the EU. So it should be done in the framework of a European action plan for regionalised fodder production (oilseeds, protein crops and possibly also cereals). This plan would mean adapting current rules for set-aside, like the move to allow organic fodder production did. This will reduce the EU footprint, shorten transport chains and help close mineral cycles in farming. The latter is important because the EU currently imports massive amounts of fodder from elsewhere (Brazil, USA, Thailand), with negative consequences on biodiversity in those regions.

Pesticide use in agricultural food production is legally restricted to less toxic and degradable substances. This obligation has not to be met when it comes to non-food dedication of agricultural products to the detriment of biodiversity. This makes non-food crops on set-aside land even more unwelcome.

The biofuel scheme means a double subsidy: farmers currently get a fixed sum from the EU-budget for not using their land for a year or more (set-aside). In case of the biofuels through national tax incentives - they get a further indirect subsidy by creating a market for biofuels at artificially low prices. The net winners will be the large, generally rich, arable farmers in France and Germany. The environment and the tax payer are the losers.

## **Conclusions:**

The Memorandum of the Draft Proposal from June this year sets itself four targets derived from the Treaty:

- i. Limiting climate change and increasing the use of clean energy
- ii. Addressing threats to public health
- iii. Managing natural resources more responsibly
- iv. Improving the transport system and land use.

Concerning climate change (i), modest improvements may be achieved, although they are not cost-effective compared to other options to reduce climate change potential. Threats to public health (ii) will not be addressed. The saving of natural resources (iii) – will be insignificant in the case of fossil fuels whereas the threat to biodiversity will be – as in the past - too high. Transport systems will not be improved and land use will even be exacerbated (iv).

We therefore urge the Commission to withdraw a Proposal that is not useful in so many respects.

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<sup>i</sup> Ressourcen- und Emissionbilanzen: Rapsöl und RME im Vergleich zu Dieslkraftstoff; Deutsches Umweltbundesamt (UBA); 1999

<sup>ii</sup> Environmental and Energy Aspects of Liquid Biofuels; Wim de Boo; Institute for Alternative Energies and Clean Technologies, Delft, 1993

<sup>iii</sup> Draft Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of biofuels for transport, 28.6.2001

<sup>iv</sup> A Technical Study on Fuels Technology related to the Auto-Oil II Programme; Bechtel Limited and Prof. C. Arcoumanis

<sup>v</sup> Directive 98/69/EC relating to measures to be taken against air pollution by emissions from motor vehicles and amending Council Directive 70/220/EEC (passenger cars); Directive 1999/96/EC on the approximation of laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression ignition engines for use in vehicles, and the emission of gaseous pollutants from positive ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles and amending Council Directive 88/77/EEC (heavy duty vehicles).