

# EBB

## European Biodiesel Board

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## PUBLIC CONSULTATION ON INDIRECT LAND USE CHANGE EBB RESPONSE

### Introductory remarks

EBB is the European federation of biodiesel producers, gathering 74 companies and associations across Europe and representing the major part of EU's biodiesel output. Today, biodiesel represents ¾ of the biofuels consumed in Europe.

This document presents the EBB response to the public consultation organized by the European Commission on Indirect Land Use Change (ILUC), for the purpose of Directive 2009/28 implementation.

1) Do you consider that the analytical work referred to above, and/or other analytical work in this field, provides a good basis for determining how significant indirect land use change resulting from the production of biofuels is?

In line with Article 19-6 of Directive 2009/28 (the RED), the European Commission has endeavoured to submit a report by end of 2010, reviewing the impact of ILUC on greenhouse gas (GHG) emissions of biofuels. If appropriate the report shall be accompanied by a proposal "based on the best available scientific evidence, containing a concrete methodology for emissions from carbon stock changes caused by indirect land use changes".

Despite the number of studies recently completed and attempting to assess the existence and magnitude of land displacement as a result of agricultural production (i.e. for biofuels), biofuels ILUC remains **a highly debatable, yet undemonstrated, concept** and certainly one upon which public policies cannot be based.

Indirect land use changes cannot be observed directly and therefore it is impossible to attribute ILUC effects to individual consignments of biofuels. This is the reason why the European Commission has undertaken a wide-ranging modelling exercise, in an attempt to define the existence and scope of this phenomenon.

The four studies conducted by Commission services, and which are the focus of this consultation exercise, although representing a substantial contribution, do not bring a definitive, clear-cut and undisputable answer to the questions surrounding the ILUC concept.

EBB therefore considers the Commission analytical work published until now as an **insufficient basis for determining the existence and magnitude of biofuels ILUC.**

EBB would like to highlight the two main shortcomings of the modelling work presented by the Commission:

- Inadequacies in the models, assumptions and data used;
- The partial nature of the exercise, which notably disregards the direct and indirect impact of fossil fuels.

These two aspects are further detailed below:

A. Inadequacies in the EC models, assumptions and data

Despite the substantial work carried out by Commission services in completing the four studies, these present a number of inadequacies leading to considerable uncertainties in the final results:

- The majority of the models used by the EC are “partial equilibrium models”, which only look at developments in the agricultural sector in isolation from other related sectors (energy); these models are therefore much less appropriate to forecast future land use as a result of increased biofuels demand;
- None of the models used include a scenario without biofuels, so that the genuine ILUC impact of biofuels per se is in fact not assessed;
- Vegetable oils markets are considered as a single pool, and in many cases there is no way to attribute biodiesel production to a specific feedstock (rapeseed, sunflower, soy, palm). In addition, the models do not account for the use of waste and residues as biodiesel feedstock, which by definition have no land use impact;
- Most of the models used have not been specifically designed for biofuels: as a result they cannot always properly differentiate between the different biofuels pathways;
- In many cases, the land use databases retained are incomplete (only few countries) and partly outdated;
- The positive impact of co-products is not always properly included in the models; in addition there is a high degree of uncertainty concerning the ratio of substitution between biofuels co-products and crops used as animal feed; this uncertainty significantly affects the quantification of ILUC: in recent studies, the reduction in ILUC linked to animal meal substitution by biofuels co-products is estimated between 8 and 64%<sup>1</sup>;
- Forecasted yields increase by 2020 are debatable (EU yields in 2020 would be less than today!) and in most cases do not account for future technological developments ;
- The positive impact of oilseeds in the crops rotation on the yields of the following crops is not taken into account: it should be reminded that wheat cultivated after rapeseed typically presents an additional yield increase between 300 to 600kg/ha<sup>2</sup>.
- The land carbon stocks values of different land types are attributed arbitrarily;
- Pre-existing deforestation caused by logging is wrongly attributed to biofuels crops cultivation; this often leads to an overestimation of the GHG impact generated by ILUC;
- The models use a fossil fuel comparator based on an average of current emissions from conventional oil sources, instead of comparing biofuels to the marginal (and most polluting) oil supply, which is the oil that biofuels (being a marginal substitute) actually replace;
- More generally, the use of econometric models implies a static situation between now and 2020 and therefore the future effects of EU biofuels sustainability requirements, as well as relevant national policies, are not at all taken into account. For instance, none of the studies accounts for the fact that the greenhouse gas performance of biofuels will improve between now and 2020. Directive 2009/28 already contains a number of robust safeguard that will prevent unsustainable biofuels production. The Directive specifically entails minimum GHG saving thresholds and will prevent biofuels production from certain land types (high carbon stocks land etc). It is particularly illogical to assess biofuels impact without taking into account the effects of the framework that has been specifically designed to guarantee their sustainable production.

<sup>1</sup> DG ENER, *The impact of land use change on greenhouse gas emissions from biofuels and bioliquids – literature review*, p.6

<sup>2</sup> For instance, the increase is 600kg/ha in O. Christen *Ertrag, Ertragsstruktur und Ertragsstabilität von Weizen, Gerste und Raps in unterschiedlichen Fruchtfolgen*. Institut für Acker- und Pflanzenbau, Universität Halle-Wittenberg, 2001.

The above aspects can reasonably lead to the conclusion that the ILUC effects of the EU biofuels policy, and the related GHG emissions, modelled in the EC studies have been **largely overestimated**.

*B. Any scientific work on biofuels ILUC should entail a comparative assessment of fossil fuels direct and indirect impacts*

One major flaw in the EC approach to ILUC is that it only addresses biofuels impact, without a corresponding assessment of fossil fuels externalities. Ultimately, the real issue behind any biofuels policy is to determine how much GHG emissions can be saved when substituting fossil fuels with biofuels. The exclusive focus given to biofuels in the EC ILUC modelling and in the present consultation results in a situation where biofuels and fossil fuels will be assessed using different benchmarks, which cannot be considered as a serious scientific approach. There should be instead a direct comparison of the externalities of both fuel types, taking into account fossil fuels IDOUC (Indirect and Direct Oil Use Consequences).

Recent scientific work has been conducted on the externalities of fossil fuels. As a matter of example, Liska and Perrin (Nebraska University, August 2010) conclude that the range of emissions linked to securing US foreign oil supply is roughly similar to ILUC impact of biofuels as modelled in the US. And yet, this conclusion is reached when considering only the emissions relating to oil security operations. The increased GHG burden of fossil fuels would be much higher when all externalities would be taken into account (oil spills, land disturbance during oil extraction, etc).

In October 2010, a study released by the University of California<sup>3</sup> found that land disturbance as a result of conventional and unconventional oil extraction can be non trivial. GHG emissions per hectare as a result of this can be similar or higher than emissions from direct land use change caused by biofuels<sup>4</sup>.

The above illustrate that ILUC per se is not an appropriate matrix to assess the ultimate benefits of EU biofuels policies. A balanced consideration of biofuels impact can only be achieved if a comparison of all direct and indirect emissions from biofuels **and** fossil fuels is performed.

**Until an appropriate, transparent and peer-reviewed methodology ensuring this comparative analysis has been defined, any preliminary conclusion reached on biofuels ILUC will be necessary biased and partial.** In this perspective, urgent progress on the implementation of the Fuel Quality Directive 2009/30 are required, with a view to defined a life-cycle GHG methodology for fossil fuels that mirrors the one already defined for biofuels.

More generally addressing efficiently the issue of land displacement worldwide requires a more comprehensive and sophisticated approach covering all agricultural production (for food, feed, clothing, energy) as well as all wider phenomena impacting global land use change (for instance urbanization, etc). Land use demand is driven by a multiplicity of factors and isolating the impacts of biofuels crops (representing less than 2% of worldwide arable land) will do little to solve the issues related to global land displacement.

2) On the basis of the available evidence, do you think that EU action is needed to address indirect land use change?

Considering the lack of robust and converging scientific evidences, **EBB considers that no EU action is necessary on indirect land use change**. The driving principles of any EU public policy should be sound science and legal certainty; imposing a penalty based on the ILUC concept would not meet these requirements. It would be indeed unreasonable to risk penalizing entire economic sectors involved in the biofuels supply chain on the basis of disputable scientific elements.

<sup>3</sup> S. Yeh, S. Jordaan, A. Brandt, M. Tureskey, S. Spatari, D. Keith, *Land Use Greenhouse Gas Emissions from Conventional Oil Production and Oil Sands*, ITS UC Davis, October 2010.

<sup>4</sup> Emissions range from 73 tCO<sub>2</sub> eq/ha for Californian crude oil to 3596 tCO<sub>2</sub> eq/ha for oils sands (surface mining process).

As a prerequisite to any future action on ILUC, the EU should urgently develop scientific work aiming at modelling the negative externalities of fossil fuels extraction, transport and refining. This will be a necessary step to enable a direct comparison between biofuels and fossil fuels. In other words, if an action on ILUC has to be considered in the longer term, this should necessarily be based on a comparison between biofuels impacts and all direct and indirect externalities of fossil fuels.

3) If action is to be taken, and if it is to have the effect of encouraging greater use of some categories of biofuel and/or less use of other categories of biofuel than would otherwise be the case, it would be necessary to identify these categories of biofuel on the basis of the analytical work. As such, do you think it is possible to draw sufficiently reliable conclusions on whether indirect land use change impacts of biofuels vary according to:

- feedstock type?
- geographical location?
- land management?

If so, please say which, and indicate the evidence used to reach your conclusion.

As highlighted above under point 2, EBB believes that on the basis of the available science **no EU action can be taken at this stage**, in particular if this action would result in an additional burden for economic operators involved in the biofuels supply chain.

Biofuels ILUC effect cannot be assessed in the absolute but should instead be compared with all direct and indirect impacts of fossil fuels extraction, transport and refining (including oil spills, land disturbance caused by oil extraction...).

**Furthermore, any distinction of biofuels ILUC on the basis of feedstock and/or geographical origin would be totally arbitrary** under the present circumstances and would therefore raise issues of legal certainty and WTO compatibility.

4) Based on your responses to the above questions, what course of action do you think appropriate?

- A. Take no action for the time being, while monitoring impacts including trends in certain key parameters and, if appropriate, proposing corrective action at a later date.
- B. Take action by encouraging greater use of some categories of biofuels.
- C. Take action by discouraging the use of some categories of biofuel.
- D. Take some other form of action.

EBB considers **Option A as the most appropriate**, on the basis of the available science. Future monitoring of ILUC can only be achieved efficiently if extended to other economic activities (agriculture at large, urbanization etc) and specifically to fossil fuels.

Option B (encouraging certain categories of biofuels), is already been addressed in the RED, where biofuels produced from waste, residues, ligno-cellulosic material and non-food cellulosic material benefit from the double counting mechanism. In addition, biomass cultivated on degraded land benefits from a greenhouse gas saving bonus of 29 grCO<sub>2eq</sub>/MJ.

Option C (discouraging certain categories of biofuels) should be rejected given the absence of sound scientific evidences to establish such discrimination. Directive 2009/28 contains already a sufficient number of safeguards to deter unsustainable biofuels production. More specifically, EBB rejects the three policy options detailed in the consultation document:

- **Increasing the minimum greenhouse gas saving threshold** for biofuels contained in the RED: this is unnecessary considering that the initial cut-off value of 35% will rise to 50% in 2017 and 60% in 2018 for new plants. This proposal is all the more unacceptable considering the very restrictive GHG methodology retained under the RED and the fact that biofuels default values have not yet been updated to reflect past and current improvements in biofuels life-cycle emissions.

- Additional sustainability requirements: this option would be equally unacceptable, considering the numerous sustainability requirements contained in the RED, making the biofuels sustainability schemes one of the toughest existing set of sustainability principles worldwide. The biodiesel industry is committed to sustainable production, but this should not lead to an unreasonable administrative burden. Additional sustainability requirements would simply add up to the administrative burden without corresponding environmental benefit.
- Introduction of an “ILUC factor”: in view of the elements provided under point 1, **EBB rejects the introduction of an ILUC factor, which would be totally arbitrary and unjustified, especially if it would only consider biofuels “per se” and not in comparison with direct and indirect oil use consequences and externalities.**

### Concluding remarks

With regard to the questions raised in the Commission public consultation document, EBB would like to emphasize the following:

- ✓ The four Commission studies presented for public consultation do not constitute a sufficiently robust basis on which an EU action could be based; this is due to inherent limitations of the models, disputable assumptions and data, as well as the absence of comparative approach with fossil fuels;
- ✓ On this basis, EBB specifically rejects the introduction of an ILUC factor, an increase of the GHG cut-off value in the RED or additional sustainability requirements; these measures would merely result in hindering the development of the biofuels sector, without corresponding sustainability benefits. It should be reminded that at least until 2050, bioenergy will remain the main, if not the only, driver of transport sector decarbonisation;
- ✓ On the basis of existing science, no distinction between biofuels can yet be made on the basis of feedstock and/or country of origin;
- ✓ Indirect land use change effects should continue to be closely studied and monitored at an international level;
- ✓ ILUC effects of other sectors, in particular conventional fuels and food/feed/fibre production should also be modelled and duly taken into account when assessing biofuels land use impact;
- ✓ Accounting of all negative externalities from fossil fuels extraction, transport and refining is an absolute prerequisite to ensure fair and realistic assessment of biofuels;
- ✓ Instead of a penalty, positive incentives should be developed, supporting sustainable agricultural practices, cultivation on degraded lands, yields increases and the substitution of land based products by biofuels co-products. The EU should also endeavour to promote international agreements protecting carbon-rich habitats (as suggested in the 2009 pre-consultation exercise).

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