



**European Commission public consultation on Indirect Land
Use Change (ILUC)**

Consultation reply:

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**Focus of organisation: Environmental Non Governmental Organisation
ID-number EC register of interest representatives : 21782923243-97**

Date of submission: 28 October 2010

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?

Yes. The studies commissioned by the European Union, as well as other modelling studies on indirect land use change (ILUC), all indicate that ILUC due to the European biofuel policy is significant, to such an extent that a majority of biofuels produced from *energy crops* on agricultural land, is likely increase greenhouse gas emissions when indirect land use change is included in the greenhouse gas balance of these biofuels. Below figure gives an overview of the outcome of a range of ILUC studies, including the study *Global trade and environmental impact study of the EU biofuels mandate*, performed by IFPRI and commissioned by DG Trade:

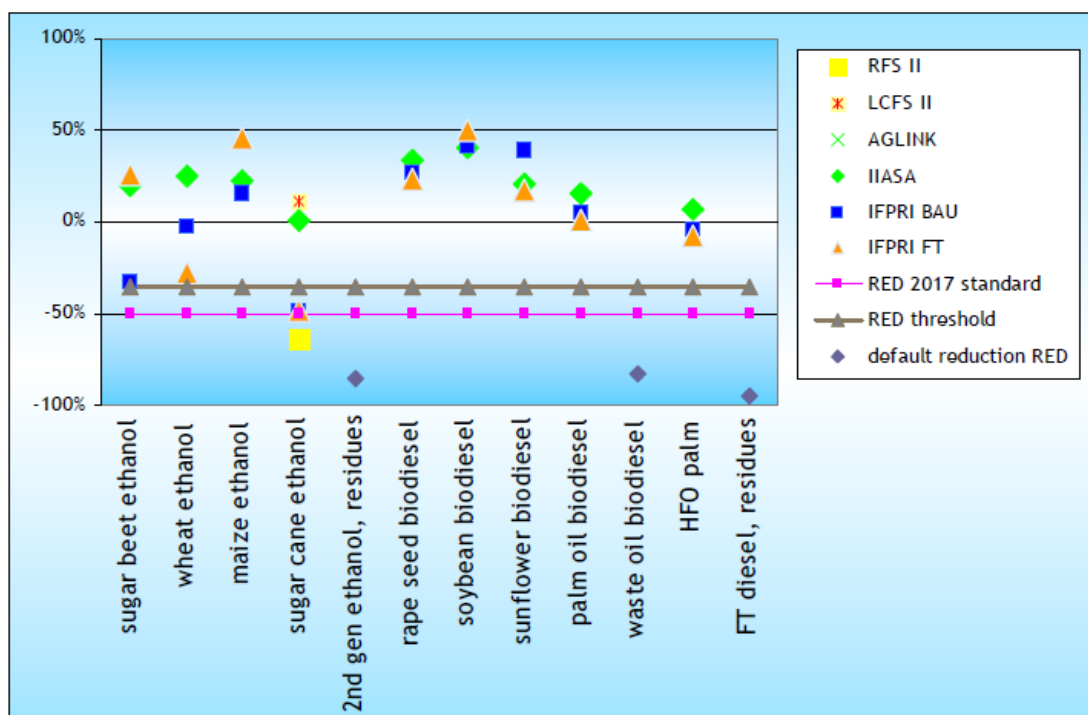


Figure 1: Overview of net greenhouse gas emission reduction of various biofuels, taking ILUC emissions into account as determined by various modelling studies. Source: CE Delft, *Biofuels: Indirect land use change and climate impact*, June 2010.

The graph shows that ILUC is a key parameter for the greenhouse gas performance of biofuels. It also shows that any policy that stimulates all biofuels as a mean to reduce greenhouse gas emissions, is ineffective. In this perspective, the question “*can it be determined how significant ILUC is*” is a second-order question about uncertainty between different modelling exercises. From a policy perspective, the question whether ILUC is likely to undermine the primary goal of the present European biofuel policy should be posed first. The answer to that question is clearly *yes*: Continuing the present EU biofuel policy is not likely to result in any greenhouse gas savings.

As for the uncertainty in ILUC modelling studies, we have the following comments:

- In modelling complex systems, most uncertainty is due to the chosen input parameters about the future development of the world. These parameters have to be forecasted by definition and always lead to an uncertainty range. The climate change projections in the IPCC report deal with an uncertainty range of about 2 – 6 degrees Celsius, also largely due to this kind of uncertainty about the future development of the world.
- Leading ILUC back to biofuels per MJ of course leads to strong aggregation. It is not feasible to define ILUC for each production unit of biofuels. ILUC modelling leads thus to default values. This is not different from the *direct* greenhouse gas reduction values for biofuels in Annex V of the Renewable Energy Directive (RED). These are also strongly aggregated values for each type of biofuel. In that sense, uncertainty is not an obstacle for defining default values for ILUC in the RED.
- The Lisbon Treaty and international law contain methods for resolving scientific disputes or uncertainties in the environmental sector. In these cases the *precautionary principle* should be leading. Biofuels with a high ILUC *risk* should thus not be stimulated by EU policy, even though there is uncertainty about the exact amount of greenhouse gas emissions due to ILUC.
- Uncertainty goes in two directions. The IFPRI report *Global trade and environmental impact study of the EU biofuels mandate* calculates marginal ILUC values per type of feedstock, based on agro-economic modelling. The result is that only bio-ethanol made from Brazilian sugarcane qualifies for the greenhouse gas saving criterion of 35% reduction in the RED, when ILUC would be included in the greenhouse gas calculation methodology in Annex V. Some of the key input parameters however were highly unrealistic:
 - The study assumes 5.6% of biofuels made from energy crops in 2020, while the National Action Plans of the member states indicate that 9% would be more realistic.
 - The study assumes that most of the target will be met by sugarcane-bio-ethanol, while the National Action Plans indicate that about three quarters will be met by biodiesel.
 - The study does not include emissions from peatlands in South East Asia, while it is fundamental that such a large carbon sink is included in ILUC modelling.

The study does indicate that ILUC rapidly increases with increasing biofuel blending in the EU, however this is not split up per type of feedstock, while such data follows from the modelling exercise and is highly relevant for policy development.

The summary in the IFPRI study does not give a correct overview of the results. The conclusion that the EU biofuel policy will lead to GHG reduction is opposite of the modelling results. The modelling should be repeated with input data based on the National Action Plans of the Member States.

However, the IFPRI study *does* show that highly optimistic input data *already* leads to significant crop-specific ILUC values. The present results of the IFPRI study can thus be interpreted as a most conservative indication of marginal ILUC values due to the EU biofuel policy. Most likely, ILUC is much more significant under realistic input parameters.

When dealing with uncertainty on ILUC, adopting the above mentioned IFPRI ILUC-values per feedstock in the greenhouse gas methodology in Annex V of the RED would be a most conservative default value for ILUC, since it would assume the lowest values in the uncertainty range in ILUC. ILUC is likely to be much more significant.

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

Yes. European citizens are told by their governments that biofuels are blended in order to decrease the emission of greenhouse gasses. The EU biofuel policy should thus realize what is promised to EU citizens, otherwise the EU policy is not legitimate and cannot be sustained. Public support is fundamental for any policy. Furthermore, European consumers pay for biofuels that are blended. These consumers demand that this extra cost lead to greenhouse gas reduction, as promised by their governments.

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.

Yes, as outlined under question 1. However, that does not mean that further research is not necessary. It is fundamental that in the coming years, the JRC will carry out further open and transparent ILUC modelling study, based on realistic input parameters. Marginal ILUC-values resulting from this ILUC study can be adopted when available. However, this does not mean that at the moment there is not enough scientific information to include ILUC in the RED. The RED states in Article 19(6):

*“The report shall, if appropriate, 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, ensuring compliance with this Directive, in particular Article 17(2).”*

Best available scientific evidence means that the unavailability of additional and improved scientific evidence is not a credible argument to delay implementation of measures in the RED. The crop-specific ILUC values in the above mentioned IFPRI study can be regarded as *best available*, even though these values are at the bottom of the uncertainty range. These values should thus be included in the GHG calculation methodology in Annex V of the RED. When additional scientific information becomes available due to new JRC modelling results, these ILUC values can be updated in the RED.

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

1. Based on figure 1 and on the fact that the precautionary principle is leading in environmental policy in the EU, the only proper action on the short term that would do right to the scientific evidence on ILUC risk, would be to freeze all blending of biofuels made from energy crops produced on agricultural land, until more evidence is available on ILUC. For comparison: When a certain medicine turns out to have unexpected but serious negative side effects, the medicine will be removed from the market instantly, until the risks are properly analysed. In such case, the interest of the society is placed above specific market interests. The same should count for biofuels with a high risk of having serious negative impacts on climate and biodiversity. Only biofuels made from wastes and residues should be allowed for the moment.
2. Next, the greenhouse gas calculation methodology for biofuels in Annex V of the Renewable Energy Directive should be complemented with a crop-specific ILUC-factor e_{ILUC} based on best available scientific evidence.
3. This improved greenhouse gas calculation methodology for biofuels should come into force in 2012 at the latest, after which all biofuels that meet the sustainability criteria in the RED are allowed, including biofuels made from energy crops.
4. Indirect land use change is not only about energy crops and agricultural land. The large-scale use of waste streams and residues, like wood chips, can also lead to negative indirect effects due to competition for these feedstock on the world market. In further EU research on ILUC, indirect effects related to waste streams and residues should be included.
5. Public transparency is necessary to increase public support for the EU renewable policy and to speed up the development of sustainable biofuels. Therefore, citizens should have access to information on the type and origin of biofuels that are brought to the EU market, specified by market party.

On behalf of Natuur en Milieu,

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