



**LUND**  
UNIVERSITY

2010-10-30

Division of Environmental and Energy Systems Studies  
PO Box 118  
SE-221 00 Lund  
Sweden

## **Reply to public consultation questions on indirect land use change impacts of biofuels**

Serina Ahlgren, PhD

Pål Börjesson, PhD, Associate professor

### **Q1) 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?**

Answer: Yes/partly. There are several models developed and utilised, to quantify the indirect land use, and like with all models the outcome is highly dependent on the structure of the model, assumptions made and input data used. However, there seems to be a good scientific basis with several international research groups working with different models, even though the individual groups results differ. From a research point of view the results are very interesting as a basis for discussion of future land use. To directly apply the results in legislation is however most questionable, since there is no scientific consensus of which results that is most valid.

### **Q2) On the basis of the available evidence, do you think that EU action is needed to address indirect land use change?**

Answer: Yes, despite that it is very difficult to make reliable quantifications of ILUC, this need to be addressed. However we think the issue needs to be analysed in a much broader perspective taking into account all land use activities (food, feed and forestry production). Biofuel production is integrated with existing agriculture and forestry production and cannot be evaluated separately.

### **Q3) 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?

Answer: No. The economic models are too coarse to give precise answers on particular biofuel chains.

A better way to evaluate specific biofuels could be to include some sort of area effectiveness parameter in the directive, expressed as the amount of biofuel that is produced per hectare and year in a specific region. This could be indicative of their potential risks of causing ILUC. Thus, individual production systems may then be compared based on the specific local conditions.

**Q4) 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 biofuel**
- C. Take action by discouraging the use of some categories of biofuels**
- D. Take some other form of action**

Answer: A or D.

An introduction of an ILUC factor may be damaging for the biofuel sector at this stage and its development towards more sustainable systems. It is furthermore not clear that an iLUC-factor actually will decrease the iLUC on a global scale.

The iLUC issue needs to be addressed over time but in other ways. Other tools need to be developed in the future (see answer to Q4).

The risk of causing significant losses of biodiversity and biogenic CO<sub>2</sub> stored in vegetation and soil should primarily be reduced by enforced land use regulations and land use plans. This will also cover all land use and not only biofuels.