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APAG CONTRIBUTION TO THE PUBLIC CONSULTATION ON INDIRECT LAND USE CHANGE IMPACTS AND BIOFUELS

Consultation Period 30/07/2010 to 31/10/2010

APAG welcomes the opportunity given by the European Commission to contribute to the public consultation on indirect land use change and biofuels.

The European Oleochemicals Industry is using renewable raw materials, especially animal fats since more than 100 years. The experience gained during this time is therefore well suited to build part of the solution for a sustainable Europe and to contribute to the European Union's objectives for a low carbon economy. The Oleochemicals Industry is increasingly concerned about the potential economic and environmental impact of shortages and price increases of its most important raw material animal fat, as a result of the European Commission's narrow focus on targets for renewable energies.

1. Do you consider that the analytical work referred to 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?

One very important topic is not addressed. This is the indirect land use change caused by using animal fats as renewable energy feedstock. Until we know what the ILUC caused by the use of animal fats will be, we cannot truly estimate the impact of using or shifting towards animal fats for biofuels.

The global trade and environmental impact study itself states that "there is disagreement about assumptions and assessment methods for estimating the indirect effects of global land-use change" (p. 23). The best known models on the impacts of biofuels differ in results and conclusions on data concerning hectares per tonne of oil equivalent (toe) and GHG emission per Megajoule (MJ) for different oil seeds.

The lack of consensus makes it necessary to address ILUC in a regulatory context. The level of uncertainty is still great, and therefore the potential of associated negative consequences as they have been expressed in the "Food for Fuel" debate need to be avoided in the context of land use change and CO2 footprint in order to not to jeopardise the acceptance of biofuels for the European consumer. Therefore the debate on tropical oils as feedstock for biofuels should not be fuelled further by incorporating animal fats into the discussion!

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

Yes, APAG is supportive of the concerns of ILUC and biofuels and asks for clear and reliable guidelines and binding implementation rules.

The different vegetable oils can substitute one another in a variety of food applications as well as in certain chemical applications and this substitution will affect the amount of land used and consequently the ILUC situation. When biofuel demand based on oils and fats increases, there will be a bigger



demand for vegetable oils which consequences in the availability for food, feed and chemicals.

Vegetable oils like rape and soy offer as co-products proteins that are used in animal feed. Although on a percentage basis one could consider the oil as the co-product and the protein as key-product, this can change when the vegetable oil price development allow a devaluation of the protein.

This means that the interchange ability in case of an increase in demand for animal feed or biofuel might lead to a complex shift in planted acreage or between crops which would eventually lead to price explosions resulting in public upset.

In case the oils would be the co-products of protein production, their use as a biodiesel would normally depend on their price compared to other vegetable oil like palm, if their use would not be made mandatory.

Therefore the interdependency of all oils and fats and grains has a huge impact on the planted acreage and land conversion. The result would be that permission of animal fats as biofuel feedstock would accelerate the switch towards palm oil planting acreages significantly.

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 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?

Animal fats are neither waste nor residues. They are not regulated by the Commission in waste legislation but in the Animal By Products Regulation 1069/2009.

They are of key importance as the basic and main renewable, sustainable raw material for the European oleochemicals industry. This is due to the chemical characteristics of animal fats, which are only similarly available in palm oil. Animal fats are produced in designated rendering processes and sold according to specifications as agreed between the supplier and the consumer. Their current use as feedstock for chemicals is not creating any ILUC impact. This would only be the case if they would have to be substituted by palm oil in case their use as biofuel would be promoted. This palm oil expansion would create the negative ILUC balance as described in the various studies.

The cascade of renewable raw materials (Lansink's ladder), whereby renewable raw materials like animal fats should be used for products first, then recycled and leaving burning for energy recovery and incineration at the end-of-life stage as the last steps of the use of biomass, should be respected to optimise added economic value, to enhance environmental benefits such as CO₂ capture and storage in nature, to avoid the usage of vegetable oils from the food and feed chain and from petrol oils instead and to preserve existing employment in the EU manufacturing industry.

Geographical location?

After their rendering, animal fats are sold according to stringent specifications which are regulated by legal requirements, standards of international trade organisations and agreements between suppliers and consumers. The majority of animal fats is currently sold to animal feed and oleochemical products. None of these applications would allow their feedstock to be derived from waste or residues.

The new Animal By Products Regulation EU 1069/2009 is setting new standards for the use of animal fats and intends to exempt oleochemicals from this regulation and declares them as end point. This will allow free global trade of rendered animal fats, whereby Europe might again become a net importer of this raw material which cannot be increased on purpose in volume but will remain a co-product of meat consumption.



The fact that the available amount of animal fats is limited and that with the new ABPR the consumption in Europe for the rendered animal fats will increase, should not be disrupted by supporting their use as feedstock for biofuels. This would not only reduce the consumption of palm oil with its corresponding positive CO₂ footprint in our industry but increase its consumption. This would be contradiction to the new EU initiatives regarding raw materials, bio economy and sustainability.

Land management?

We can assume that all future additional palm oil consumption for biofuels will be produced in South East Asian countries such as Malaysia and Indonesia and expand onto non-agricultural land i.e. tropical forest or peat land. The substitution of oleochemicals, currently based on animal fats with growth potential, by palm oil would accelerate this trend which is already happening due to the importance of palm oil for food purpose in these countries plus China and India.

Green House Gas emissions from change in above and below ground biomass stock in million tons of CO₂ according to the studies are: 4.1 million ton (in JRC 2010) vs. 3.4 million ton (in IFPRI 2010).

Carbon stock of tropical rainforest in Malaysia and Indonesia is claimed to be about 2572 tons CO₂/ha. For peat land and drainage of peat land the land conversion is claimed to cause CO₂ emission to continue indefinitely.

Deforestation due to indirect and invisible conversion of bio divers land is not even captured in these results. Substituting palm oil for the current rendered animal fats consumption for oleochemicals in Europe would mean a conversion of more than 300.000 hectares of bio divers forest or peat land.

Palm Oil represents the only suitable, natural substitute for animal fats in oleochemicals (i.e. key ingredients for the detergent industry along with textile and leather industries, soaps, paper, candles, metal working lubricants and consumer care products). If animal fats, whose supply is inelastic to an increase in demand, would be supported as feedstock for energy, this would immediately lead to **indirect land use change** and damage the ecosystem as a result of conversion of more than 300.000 ha of bio divers forest or peat land and release about additional 750.000.000 (sevenhundredandfifty million) tons or more than additional 20% of CO₂ compared to the numbers of the studies as mentioned above.

A significant aspect in this discussion is that all vegetable meal and oil markets are interconnected on a global basis. Their uses are interchangeable for human or animal nutrition and industrial applications. Classifying biofuels by origin, raw material and/or land management is therefore necessary. Additional complications related to agricultural issues, food for fuel debate, difficulties in monitoring and control would significantly be expanded if animal fats would be permitted as raw material for biofuels.

It should be made clear, that animal fats are neither waste nor residue and as such irrespective of their geographical origin and the nature of the tissues they derive from, should not be considered as feedstock in the Renewable Energy Directive!

The current studies make therefore no provision for displacement impacts on Green House Gas emissions by substitution of animal fats through palm oil in oleochemicals. It therefore bears a similar risk of unintended collateral damages by biofuels based on animal fats, as the debate on food versus fuel.



4. Based on your response 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.

This should not be considered as an option. Consumer acceptance and policy credibility depends on reliable parameter and corresponding consumer confidence.

The Department for Transportation in the UK commissioned E4Tech to study the Indirect Land Use Change impacts of the five biofuels expected to form the main supply of biofuels in the UK in the next ten years: palm, soy and oilseed rape biodiesel and sugarcane and wheat bioethanol. It is similar to all studies that animal fats and their impact on land use change has not been determined, as all studies considered animal fats irrelevant as feedstock for biofuels.

The scope was limited to these five feedstock as they were considered by DfT to be the most relevant to the UK, in view of the fact that these are the main feedstock used for biofuels consumed in the UK. This is the same for all European member states !

B. Take action by encouraging greater use of some categories of biofuel.

Subject to binding sustainability criteria to be developed, only the use of vegetable oil should be encouraged for biodiesel as biofuel. Enforcement of these criteria is an important element !

C. Take action by discouraging the use of some categories of biofuel.

As a general comment, we believe that all renewable feedstocks which are currently used by the chemical industry (without incentives, subsidies or mandates) should be excluded as part of the ladder of Lansink approach and because if these feedstocks are being taken away from the chemical industry, the latter will turn to other feedstocks which are either from petrochemical origin or will have an impact on the carbon footprint as described above.

In the case of rendered animal fats, because of their chemical properties, they can only be replaced by palm oil products as feedstock for oleochemicals, soaps and feed products.

Consequently APAG suggests to exempt rendered animal fats of all categories and origins and sold according to specifications from the feedstock for biofuels. Not only as long as the uncertainties regarding ILUC effects exist but also according to Article 19 (7) of RED and the technical and scientific progress as described above for the future !

APAG asks the Commission to extend the footnote in Annex V, Part A. to all rendered animal fats irrespective of their origin or categorisation and to inform the Member States for their NAPs accordingly. As animal fats are neither waste nor residues they should not qualify for a the GHG saving contribution of "waste animal oil" and according to Art. 21 (2) animal fats should not qualify for counting twice for GHG savings as they are neither waste nor residues and contrary to the assumption would add to GHG emissions due to ILUC effects of their substitute palm oil.

Allowing animal fats as feedstock for biofuels will lead to their substitution by palm oil in traditional applications like detergents, consumer care products or soap. Including animal fats in the definition of biomass, bioliquids or biofuels will lead to unintended environmental damage due to indirect land use change with negative consequences for CO2 savings as well as for biodiversity. All categories of animal fats need to be exempted from the Renewable Energy Directive. The suggestions of the new Animal By Product Regulation 1069/2009 to use animal fats for the production of industrial products needs to be ensured and protected.



The main lesson learned from the studies is that ILUC does indeed have an important effect on the environmental sustainability of biofuels. There is a real risk that ILUC could undermine the environmental viability of biofuels. At the same time, the biofuels modelling project has demonstrated how the current limits to data availability create significant uncertainty regarding the outcomes predicted by these policy simulations.

According to IFPRI data (Table S2b in IFPRI on-line supporting excel files), the amount of biofuels imports has been calculated considering that for biodiesel 70% is from palm fruit (from IndoMalay region) and 30% from soybean.

The investigation furthermore found that emission savings are obtained in the first 20 years after the crop conversion according to LUC and scenarios in IFPRI study. For the JRC-IPTS AGLINK-COSIMO simulations a negative GHG balance in the first 35 years is computed. The emissions saving required by the RED (>35%) however is only reached after 30 years for the BAU scenario, after about 35 years for the FT scenario and only many years later for the IPTS scenarios. And this is without the animal fats vs. palm oil impact.

D. Take some other form of action

Do not defer the implementation of ILUC as a sustainability criterion until the uncertainties have found solutions as otherwise more unintended, collateral damages will occur.

There should be no discrimination on any biofuel source unless evidence allows to assume that ILUC and other sustainability issues will have an impact. This is clearly the case for animal fats.

APAG strongly recommends to exempt tallow as feedstock for biofuel and to encouraging next generations of biofuels instead of encouraging the use of this biofuel feedstock on the basis of uncertain models, with no confidence/assurance that their use will make a positive contribution to reducing GHG emissions. Rendered animal fats are not an appropriate option for this regulatory purpose.

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(Electronic version – original signed)



Related documents:

Study "Global Trade and Environmental Impact Study of the EU Biofuels Mandate"

Study "Impacts of the EU biofuel target on agricultural markets and land use: a comparative modelling assessment"

Study "The Impact Of Land Use Change On Greenhouse Gas Emissions From Biofuels And Bioliquids"

Study "Indirect Land Use Change from Increased Biofuels Demand"

Study "Biofuels: A New Methodology to estimate GHG Emissions from Global Land Use Change"

Study "A causal descriptive approach to modelling the GHG emissions associated with the indirect land use impacts of biofuels"