

COMMENTS FROM THE MALAYSIAN PALM OIL BOARD

INDIRECT LAND USE CHANGE IMPACTS OF BIOFUELS – CONSULTATION

- 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?**

The analytical work on indirect land use change (ILUC) using the various models viz the various computable general equilibrium models, the partial equilibrium models and the allocation models is a good start to study whether such models are sufficiently reliable in predicting the occurrence and impact of ILUC on greenhouse gas (GHG) emissions as a result of biofuel implementation in the EU.

The key issue is, to see whether such models should be used, and not that we should just use them just like that in a piece of important legislation such as the EU Renewable Energy Directive (RED) without studying their reliability. In this regard, we would like to commend the EC for doing a good job in carrying out the studies and putting four of the reports on your website for public comments.

But having said that, having looked at the various models used and the data that have been used, we feel that the difference in the results in the various models are significant enough to justify having reservations. We are of the view that the EC should not consider the ILUC component quantitatively in the EU Directive on Renewable Energy. We observe that although there are some commonalities in the results of some models, there is also significant divergence in results between models in terms of magnitude and at times even in terms of direction. This does not give us confidence in using such models to determine ILUC quantitatively.

Our brief comments on the other issues requested are as follows:

- **Projected volumes of conventional and advanced biofuels in 2020;**

We feel that although you are a bit optimistic in terms of advanced biofuels, in particular second generation biofuels, these projections reflect the emphasis on fuels which avert the food versus fuel debate and will certainly spur technological innovations and progress in this area and therefore should be supported. Moreover a 70% share of first generation biofuels and 30% share of second generation biofuels, given that second generation biofuels are given double weightage means only in effect a 15% share by second generation biofuels which is not unachievable.

- **Assumptions around EU vehicle fleet and infrastructure in 2020, including diesel/petrol split and pace of introduction of new technologies;**

We do not have much comment on this as we are not familiar with EU infrastructure developments. However, we have been monitoring developments in second generation biofuel technologies and we feel that most of these such as lignocellulosic bioethanol, Fischer Tropsch diesel and catalytic depolymerised diesel will be commercially viable only nearer 2020.

- **Model's treatment of crop yield growth 'in the baseline' and in response to growth in demand;**

We feel that baseline modelling on yield should be sufficient to take into consideration future yield increases. Yield increase due to growth in demand and price is speculative and involves assumptions of increase in fertiliser use which, while reducing ILUC may increase GHG emissions. It may also assume increase in investments in R&D which is also very speculative and all these will result in results which are unreliable.

- **The underlying land use data;**

The underlying land use data can be further improved. Available data sets seem to show different figures. Ideally, the

European Commission (EC) should collaborate with countries to verify land use data obtained through satellite images.

- **The carbon stock values used in modelling and the type of converted land;**

The EC should be very careful in using carbon stock values and the type of land that will be converted. Indicative ranges could be used to compare relative carbon stock values of various land use covers. Calculations and assumptions on peat have to be treated with caution in the absence of reliable data especially for tropical peat. In addition, development on peatland or deforestation may be due to logging and not due to oil palm crop expansion for biofuels. The 'suitability' approach should be used to complement the historical approach in determining types of converted land to reflect anticipated future trends which may not follow historical trends. We wish to again stress the marked differences in results using the various models, for example the GTAP model for the Malaysia-Indonesia biodiesel scenario obtaining a low LUC of 0.08 ha/tonne oil equivalent whereas the LEITAP model for the Malaysia-Indonesia biodiesel scenario showing a much higher LUC figure of 0.43 ha/tonne oil equivalent. We note that JRC-IE has added to these models additional emissions from peat oxidation using an average value of 19 tonnes of CO₂ per ha per year and based on 33% oil palm expansion on peatland and peat oxidation emissions estimated at 57 tonnes of CO₂ per ha per year. These data need to be verified.

- **Models' treatment of co-products;**

It is very speculative which products the co-products will replace and in which country. Different assumptions will lead to varied results.

- **Significance of the results in terms of hectares of land use change and emissions.**

The results of the various models vary considerably depending on the models, data used and the underlying assumptions. In view of these, we again stress that the ILUC element should not be used quantitatively in the EU RED in computing GHG emission savings.

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

We would suggest that no action be taken in terms of adding an ILUC component of emissions in computing GHG emissions from biofuels. However, it would be wise for the EU to monitor developments in the next five years and if possible and not too burdensome, to test the various models. This could be reviewed after five years.

- 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?**
- **Geographical location?**
- **Land management?**

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

We are of the view that a five year period of monitoring should be done as stated earlier but there should be no action to discriminate against any type of biofuels based on feedstock type, geographical location of land management based on modeling of ILUC. This is because we feel that the models and data used may not be reliable enough to allow fair attribution and measurement of effects.

- 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.**

Please say how the monitoring should be done and what these parameters should be.

Out of the four alternatives, this option A is the most appropriate. Monitoring should be done to observe certain key parameters.

These should include the land areas for each type of biofuel crop, volume of raw material (e.g. vegetable oils both for biofuel and other uses) and biofuel produced and volume of each biofuel used in the EU. Care should be taken to see if expansion in land areas is actually due to EU biofuel demand or general increase in demand of such raw materials for other uses. If there is cause for real concern, corrective action should be across the board and not discriminate between types of vegetable oils.

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

Please say which biofuels, why and what sort of encouragement should be given.

We do not think that there should be any discrimination between first generation biofuels in terms of ILUC but any encouragement of second generation biofuels using crop residues would be appropriate.

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

Pease say which biofuels and why, as well as what sort of measures should be taken, for example:

- **increasing the minimum greenhouse gas saving threshold for biofuels**
- **imposing additional sustainability requirements on certain categories of biofuel (these could, for example, require the use of practices that can help mitigate indirect land use change impacts)**
- **attributing a quantity of greenhouse gas emissions from indirect land use change to all biofuels that use land**

If the latter, please say how this should be calculated, and demonstrated – for example:

- **A factor based on the estimated (modelled) land use change from a marginal extra quantity of crop production**
- **A factor based on the average land use change from crops over some recent period;**

- A factor based on any other consideration.

Please also say:

- Whether it should be reviewed and if so how often
- Whether it should be implemented with any accompanying measures.

We do not agree with this option and our answer would be same as B above.

**D. Take some other form of action
Please say what action and why.**

We do not propose any other form of action.

**Malaysian Palm Oil Board
22 October 2010**