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5. 03. 2012

Ms Alina UJUPAN  
Cabinet Staff  
Cabinet of Mr. Ciolos  
European Commission  
200 rue de la Loi  
B-1040 Brussels

Brussels, 2<sup>nd</sup> March 2012

**Re: Biofuels - iLUC factors based on the IFPRI report**

Dear Madam,

According to our information, the European Commission are currently discussing, amongst other matters, the inclusion of iLUC values in the greenhouse gas balance of biofuels. The report **"Assessing the Land Use Change Consequences of European Biofuel Policies"** published by the International Food Policy Research Institute (IFPRI) in October 2011 is apparently being used as a basis for this discussion. An overview of the uncertainties and errors in the MIRAGE-BioF model, some of which were identified by the author himself, is provided in attachment.

**1. LUC values**

According to the author, Mr [REDACTED], the model is not suitable for precisely estimating the extent of land use change and the resulting greenhouse gas emissions, due to data uncertainties.

Providing precise LUC values in the report (table 14, p. 59) directly contradicts the author's proviso.

**2. Prohibited land use change**

The fundamental basis of the model ignores measures taken by governments to prevent land use change. Protection measures stipulated in Directive 2009/28 such as bans on direct land use change are not taken into account. The result is that the model erroneously assumes that biofuels prohibited by Article 17 paras. 3 and 4 Directive 2009/28 that were produced from raw materials stemming from land such as primary forest, peatland, etc. are in fact accepted within the EU framework. The reason for this is that the model is unable to distinguish between direct and indirect land use change. As a result, the model estimates, for example, that approx. 70% of greenhouse gas emissions caused by land use change will come from the production of raw materials originating from peatland, forests and rainforests. Government measures that work to counteract direct and indirect land use change are also disregarded with no distinction. These are, however, extremely important. In Brazil, for example, the "Amazon Region Protected Areas (ARPA)" programme<sup>1</sup> brought about a decline in rainforest clearance by 75% from 28,000 km<sup>2</sup> in 2004 to 7,000 km<sup>2</sup> in 2010. The effect for the model is particularly critical because by far the greatest case of land use change is projected for Brazil (0.49 million ha), despite it being largely prohibited there. Future government protection measures are also ignored. Even if these measures cannot be projected with certainty, completely ruling them out is problematic. It must be assumed that measures undertaken by governments to protect land will give priority to land with particularly high carbon stocks, thus preventing high greenhouse gas emissions.

<sup>1</sup> www.wwf.de

Overall, it must be assumed that up to approx. 70% of the projected greenhouse gas emissions would be eliminated if government protection measures were taken into account. The model is therefore so flawed that not only is it not possible to predict quantities, a qualitative forecast, i.e. whether land use change is anticipated and, if so, which land use change as well as the resulting greenhouse gas emissions, would also be meaningless.

### **3. Data errors**

A particularly notable example of the use of inaccurate data in the model is the global cropland basis. For the 2008 baseline scenario, apparently modified results from a simulation by the MIRAGE-BioF model were used instead of the FAO's data for that year (1.53 billion ha). The supposed value of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. This would suggest that approx. 410 million ha of cropland has not been taken into account. This represents a data error of 27%.

### **4. Review**

The author of the IFPRI report rejected validation of the model by independent experts at a hearing organised on this issue by the Commission on 18<sup>th</sup> November 2011. In our opinion, this violates the basic rules of good scientific practice. Performing an external review of the model for its suitability to forecast land use change by applying it to a historic time period (for example, 2000 to 2010) where actual land use change is known is absolutely essential. These types of evaluations are, for example, a scientific standard of the IPCC.

To sum up, the number and significance of the uncertainties are so critical that the model is not suitable for assessing the impact of indirect land use change in accordance with Article 19 para. 6 of Directive 2009/28.

Copa-Cogeca rejects this report being used as the basis for a proposal, in view of Article 19 para. 6 of Directive 2009/28. The assumptions and data that the MIRAGE-BioF model is based on are so flawed that the model is unsuitable for forecasting greenhouse gas emissions brought about by land use change. If the IFPRI report is used as a basis, the iLUC values introduced into law on the greenhouse gas balance of biofuels would be arbitrary, given that the MIRAGE-BioF is not in a position to forecast land use change and the associated greenhouse gas emissions.

We hope these comments will be granted your full consideration.

Yours faithfully,

  
  
Secretary General

CC: 

Annex : BI(12)1585

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<b><u>Analysis of the IFPRI report</u></b>		
<b><u>Results of the analysis</u></b>		
<p>The MIRAGE-BioF model used as a basis for the IFPRI report contains errors that are so numerous and critical that neither a quantitative nor a qualitative forecast is possible, i.e. whether land use change is anticipated and, if so, what kind as well as the resulting greenhouse gas emissions.</p>		
<p>“However, we also emphasize the critical uncertainties that prevent us from being able to provide a precise two-digit figure on the extent of land use change and associated emissions.” Laborde et al. (2011)</p> <p>The overview below contains a detailed list of “uncertainties” identified by the author as well as other errors and incorrect assumptions.</p>		
<b><u>Outline of the analysis</u></b>		
1 to 6	Basic problems	Page 1
7 to 33	Uncertainties: 27 significant unreliable estimates	Pages 1 to 7
34 to 41	Data errors: 8 critical data errors	Page 8
42 to 47	Assumptions: 6 impermissible model assumptions	Pages 9 to 10
	Sources	Page 10

## 1. Basic problems

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	IFPRI	Analysis	Error
1.	Transparency and reproducibility of MIRAGE-BioF	It is not possible for independent experts to validate the model calculations of the MIRAGE-BioF model.	Violation of the principles of scientific practice <sup>1</sup>
2.	Absence of peer review	The quality of the model has not been evaluated by other scientists to date.	
3.	An evaluation/validation of the IFPRI model was refused by Mr Laborde.	Evaluation/validation: check of estimates for a historical period using real data	
4.	No distinction made between iLUC and dLUC. <i>"We do not distinguish between indirect or direct effects."</i>	Is not capable of forecasting indirect land use change	Emissions overestimated by up to 70% (p.21, figure 11 p.54)
5.	Land use change prohibited by governments is ignored. <i>"It should be borne in mind that these results are obtained without any explicit modelling of the impact of the sustainability criteria in the RED ..."</i>	Nature conservation laws and, e.g. the European sustainability criteria, are not taken into account in the study.	Biofuels produced from raw materials from "no go areas" are accepted in the model (p.13).
6.	The promotion of the use of degraded land is not taken into account in the model.	Violation of Directive 2009/28/EC	Bonus for crops grown on degraded land is counteracted.

<u>2. "Uncertainties" according to IFPRI</u>		<u>Effects on the results</u>
Pages 24 to 27		Relevance
1. <u>Uncertainties in relation to the additionally needed land</u>		
7.	Crops in the baseline scenario Biofuel yields per unit of feedstock	High Results for crop yields (p.35,56) and biofuel production by feedstock (p.42,69).

<sup>1</sup> <http://www.leibniz-gemeinschaft.de> "Sicherstellen der Reproduzierbarkeit vor der Veröffentlichung (Kriterien der Wiederholbarkeit und Nachvollziehbarkeit) ebenso wie die Schaffung von Zugangsmöglichkeiten für berechtigte Dritte." ("Ensuring the Reproducibility Prior to Publication (Criteria of Reproducibility and Traceability) as well as the Creation of Access Possibilities for Authorized Third Parties.")



2. "Uncertainties" according to IFPRI			Effects on the results
	<i>"Crop yields in the baseline, biofuel yields per unit of feedstock. The higher the yield, the smaller the LUC. They depend on technology, which in the medium / long term depends on expected profitability. They can also be impacted by exogenous conditions (climate change...);"</i>		
8.	Crop yield response in the scenarios	High	Results for crop yields in the baseline scenario ( p.35) and worldwide production (p.40,43).
	<i>"Crop yield response in the scenarios. The more yields react to crop price increases, the smaller the LUC. It depends on the price sensitivity of farm decisions (e.g. fertilizer, reduction in waste);"</i>		
9.	Crop yield on new cropland	High	Global production (see p.40).
	<i>"Yield on new land. When crops expand into new land, yield depends on the quality of the new land, previous uses of that land and availability of services such as irrigation for the new area;"</i>		
10.	Supply response of farm inputs such as fertilizer		Results for intensification and land use change (p.55,68).
	<i>"The supply response of farm inputs such as fertilizer. The less elastic the supply of farm inputs, the less elastic the crop supply. Effects on LUC can go either way."</i>		
11.	Demand response for raw materials	High	Results for demand (p.66-67).
	<i>"The demand response for all the crops. If the price of crops increases, how will consumers react? How do intermediate sectors modify their demand for inputs? Do they substitute some inputs by others (e.g. cotton replaced by synthetic fibers, farm fishing using biofuels co-products like DDGS instead of other animal based meals?)? The more elastic the supply, the more limited the LUC."</i>		
12.	Degree of substitution among oil products (in particular the effects of peatland emissions)	High	Effects on the respective CO2 balance of biofuels (p.54,63) degree of substitution in the study results in major "leakage effects" (p.66-67,71).
	<i>"A particular issue is the degree of substitution among vegetable oils. To what extent can rapeseed, sunflower, soybean and palm oil be substituted in the demand of different agents (households, industrial demand, biofuel production)? The higher the substitution, the larger the peatland effect – a large source of carbon emissions – for all biodiesel feedstocks."</i>		
13.	Livestock sector response: effects of the co- and by-products/feed composition/demand for meat	High	Results for feed prices (p.45,100) and degree of substitution for feed (p.64).
	<i>"The livestock sector. It is important to single out livestock sector behavior due</i>		

2. "Uncertainties" according to IFPRI		Effects on the results	
	to the role of co- and by-products of biofuels as feed for livestock. Could livestock production intensify? How flexible is the composition of the feed ration? And ultimately, how will this affect demand for meat?"		
14.	<p>Economic triggers of land use change:</p> <ol style="list-style-type: none"> <li>1. Option between different raw materials</li> <li>2. Expansion of cropland</li> </ol> <p><i>"Price sensitivity of land allocation decisions, i.e. the land elasticities in the model. It has two dimensions. First, can farmers re-allocate their land among different agricultural uses? It depends on the way prices will affect cropping decision under a set of technical (soil quality, needs for crop rotation) and behavioral (risk aversion of farmers and needs to keep a diversified portfolio of products) constraints. Second, the potential scope for farmers/ranchers to extend their agricultural land in new areas has a direct bearing on the LUC effect. If land extension is not possible due to the lack of suitable land, the high cost of accessing the new land (transport cost), the high cost of putting this new land into cultivation (needs of irrigation etc.), than land extension will be limited and biofuel demand will lead to higher agricultural prices and more constraints on the demand components, as well as more incentives for intensification;"</i></p>	High	Results (p.95-96).
15.	<p>Globalisation: impact on international competition</p> <p><i>"How do business networks operate and to what extent is the supply chain exposed to international competition? It defines the possibility of importing foreign inputs. The LUC consequences depend on the extent to which trade facilitates the relocation of production from low to high yield regions, or the reverse;"</i></p>		Impact on model is not transparent. (see item 1)
16.	<p>Relationship between global biofuel production and the price of crude oil</p> <p><i>"The global level of biofuel production and the level of oil prices. In the case of high oil prices, many countries can have profitable biofuel production at market prices (even without mandates). In this context, a stronger demand in Europe, driven by policy, will increase the price of biofuels, attract foreign production and at the same time deter foreign consumption (for the share not constrained by foreign mandates). In this case, EU demand does not necessarily lead to an increase in production of biofuels but just a reallocation of consumption at the world level, leading to minimized LUC effects;"</i></p>	High	Assumptions about the oil price (p.36,37) and development of the oil price (p.57).

2. "Uncertainties" according to IFPRI			Effects on the results
17.	<p>Macroeconomic factors such as exchange rates, direct investments, etc.</p> <p><i>"Macroeconomic conditions such as exchange rate, foreign direct investments, etc. For instance, if macroeconomic conditions leads to a strong real appreciation of the Brazilian currency compared to the US dollar, US ethanol is more competitive than Brazilian and EU demand patterns, both in the baseline and in the scenario, will be different, as well as the global land use pattern (even for non biofuel crops). If macroeconomic conditions favor farm expansion in regions with high yields and/or strong land market governance, the LUC effect will be reduced;"</i></p>		Assumptions and results of prices (p.36, 101-102).
18.	<p>Effects of economic development: future demand for agricultural products and land</p> <p><i>"Economic growth in the baseline and its consequences for the demand of agricultural products, for food and non food, and for land (urbanization). It affects the amount and quality of land when the policy shock is introduced. If land availability has been reduced, the LUC effect will be reduced, but if high quality land availability has been reduced first, it decreases marginal yield and leads to stronger LUC."</i></p>		Results for demand for raw material (p.83,86) and land (p.71).
19.	<p>Flexibility of biofuel policies: impact on investments in technology and yield improvements</p> <p><i>"Biofuel policies and their degree of flexibility. It impacts on the overall investment in biofuel technologies and yield improvements (creating positive externalities and reducing LUC for EU policies), the capacity of EU to use foreign production (see 8) but also the global pressure on land and agricultural markets in the baseline"</i></p>	High	Results for the impact of biofuel policies (p.37,44,85).
20.	<p>Trade policies can encourage or hinder competition</p> <p><i>"Trade policies that shift competitiveness among suppliers or can reduce the access of some producers to the EU market (e.g. antidumping, export restrictions);"</i></p>	High	Difference between the "No Trade Liberalization" and "Trade Liberalization" scenario (s.45-47,59).
21.	<p>"Land governance": can pressure on land in developing and emerging countries be regulated by the government</p> <p><i>"Land governance in the different countries and the capacity to enforce conservation programs that will limit the agricultural land expansion following</i></p>	High	The model ignores legislation to protect land (e.g. sustainability criteria of Directive 2009/28/EC (p.13).

2. "Uncertainties" according to IFPRI			Effects on the results
	<i>a price increase,"</i>		
22.	Public investment in infrastructure <i>"Public investment in infrastructure (transportation, irrigation) to make new land more easily available (increase LUC, but at the same time improved irrigation on existing land also increases yield leading to reduction in the LUC);"</i>	High	Impact on model is not transparent. (see item 1)
23.	Public investment in biofuel research <i>"Public R&amp;D in new technologies to increase yields (at the crop level or at the biofuel conversion/crushing level) will reduce LUC (see item 1);"</i>		Development of the technology (p.56;60).
24.	Organic farming: lower degree of intensity <i>"Agricultural policies that promote less intensive schemes with lower yield production (e.g. organic farming). They will increase the LUC effect."</i>		Intensification (p.55).
25.	All policies that will impact economic conditions (refers to no.11) <i>"All policies that will have an impact macroeconomic conditions discussed in item (11)"</i>		Impact on model is not transparent. (see item 1)
II. <u>Uncertainties with respect to land conversion</u>			
26.	Localisation of land use change by a country and sub-region <i>"The country and sub-region where the land expansion takes place. This depends of the crop mix required and other factors affecting competitiveness (see items 7, 9...). Different regions have different biotopes and carbon stocks associated."</i>	High	Results on scope and type of converted land (p.48, 54) and localisation of converted land (p.50,70).
27.	Scope of conversion of pasture to cropland <i>"How easily can pasture be converted to crop land? If it is easy, cropland will extend more in pasture and it will mitigate the related emissions compared to deforestation."</i>	High	Distribution of the new cropland (p.51).
28.	Scope of conversion of forests to cropland <i>"How elastic is the demand for wood products and how easy is the conversion of managed forest to cropland?"</i>		Distribution of the new cropland (p.51).
29.	Calculation of CO <sub>2</sub> emissions by hectare and region <i>"What is the right average value of carbon stocks per hectare in a region? Does the use of averages (as done in this report) induce a bias? Is there a correlation between the initial carbon stock of an area and the potential crop yield? If so, when extension takes place, farmers will naturally targets high carbon stock"</i>	High	Results of CO <sub>2</sub> emissions (p.52-53,71) and assumptions (p.93-94).

<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>	
	regions first, leading to increased LUC emissions. How to value recently afforested areas?"			
30.	<p><b>Emissions from peatland</b></p> <p><i>"Peatland emissions. Among all source of emissions, the case of palm trees grown on peatland is among the most sensitive for our results. In recent years, estimates of carbon emissions from peatland have increased systematically and recent research gives a range of 50 to 120 tons of CO<sub>2</sub> / Ha / year."</i></p>	High	Assumptions for distribution (p.54) and effects on the respective CO <sub>2</sub> balance of the biofuels (p.63,71).	
31.	<p><b>Agricultural practices in 2020</b></p> <p><i>"What will be the agronomic practices in 2020 on the new land? Different depth for tillage leads to different emissions of mineral carbon stored in the soil and can significantly reduce overall emissions. It depends of the availability of technology but also the capacity to adopt them (e.g. Genetically Modified soybean with Round-up and no tilling)"</i></p>	High	Impact on model is not transparent. (see item 1)	
<b>III. Political uncertainties</b>				
32.	<p><b>Legislation and enforcement for land protection</b></p> <p><i>"Any land management policies will have an impact on the type of land that can, or can not, be converted. Legislation, and even more importantly its enforcement, play a critical role in protecting high carbon value areas (conservation programs, forestry code. etc.). Analysis of past behavior through satellite images is a relevant exercise but the margin of errors in such exercise is also very large;"</i></p>		The model ignores legislation such as EU cross compliance	
33.	<p><b>Legislation in the agricultural sector</b></p> <p><i>"Regulations affecting the agricultural sector: animal welfare, land set aside etc, may influence the type of land converted (pasture vs forest etc.);"</i></p>		Impact on model is not transparent. (see item 1)	



### 3.Data errors

	IFPRI	Analysis	Error
34.	Global cropland in the baseline scenario 2008 1.12 billion hectares (MIRAGE-BioF)	Laborde et al. 2011: MIRAGE-BioF simulation: 1.24 billion ha in 2008 Monfreda et al. 2008: 1.29 billion ha in 2000 Global cropland according to FAO in 2008 1.53 billion ha	The value supposedly used of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. Underestimated by 410,000,000 hectares in the baseline scenario
	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 19)	Source: FAOstat (2011): <a href="http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor">http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor</a>	
35.	Forecast of fuel demand for 2020 at 316 Mtoe	Forecast for 2020 according to JEC 2011: 281 Mtoe	35,000.000 toe overestimated in the forecast for 2020
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: JEC Biofuel Programme (2011): <a href="http://ies.jrc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf">http://ies.jrc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf</a> (p.20)	
36.	Forecasts for crop yields in 2020	Crop yields significantly underestimated on new cropland	Forecasts of crops underestimated between 25% and 50%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40)	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 31)	
37.	Nature conservation: legislation and regulations	European sustainability requirements are not taken into account	Forest clearances overestimated by 660,000 ha
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.13,56)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.13,56)	
38.	Crop rotation and multicropping	Multicropping is not taken into account in the model	Multicropping underestimated on 150,000,000 ha
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (S.85)	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)	
39.	Forecast of oil price for 2020 (\$110)	Model result shows a falling oil price 0.94%	Model result



	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36), Laborde et al. (2011): "Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty" (S.12)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.57)	contradicts all known forecasts
40.	Baseline scenario 2008: according to IFPRI percentage of soybean in European biodiesel 24%	Soybean in German biodiesel maximum 8%	Soybean percentage overestimated by 67%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40)	Source: Greenpeace (2011): "Investigation on diesel", July 2011	
41.	Oil content of rapeseed: 0.35t vegetable oil per tonne of rapeseed according to IFPRI	Vegetable oil per tonne of rapeseed 44%	Oil content underestimated by 26%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.100)	Source: Ufop (2011): "Sortenversuche 2010 mit Winteraps, Futtererbsen, Ackerbohnen und Sonnenblumen" (S.24,25)	

#### 4. Mistaken assumptions

	IFPRI	Analysis	Error
42.	Import demand: EU bioethanol demand for 2020 will be covered up to 91% by Brazilian bioethanol imports (BAU 48%)	IFPRI thus forecasts growth in cropland of 11% for Brazil although Brazil currently imports bioethanol.	Bioethanol imports from Brazil overestimated by 6,825,000 toe
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36,38-39)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36)	
43.	2020 target: Additional biofuel demand of 15.5 Mtoe for the year 2020	Biofuel demand increases in a "BigBang" in a single year by +132%.	The effects of changes such as increased efficiency underestimated
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	
44.	High land rents result in new land being converted to cropland (land use change)	Mistaken assumption: the correlation between high land rents and land use change is statistically not significant.	Land use change overestimated.
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.104), Klepper et al. (2011): "Review of IFPRI study" (p.7)	Klepper et al. (2011): "Review of IFPRI study" (p.7)	
45.	Modelling the "oilseed sector" not transparent: mistaken	Inaccurate production ratio between oils and co-	Land use change

	focus on the fuel sector, food sector not adequately accounted for.	products as well as the demand for vegetable oils as food	based on biodiesel demand overestimated
	IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.99,106)	(S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)	
46.	Substitution: high degree of substitution in the model means that demand for vegetable oils always leads to increasing demand for palm oil.	Mistaken assumption: vegetable oils cannot be completely substituted. Standard specifications have to be taken into account for biofuels.	
	IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40,59,69)	(S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 34)	
47.	Scope of land use change caused by palm oil: 33% on "peatlands" (Indonesia and Malaysia)	New studies show that the assumption of 33% made by Edwards is inaccurate: 13% in Indonesia and 9% in Malaysia	Peatland emissions overestimated (34% of the biodiesel emissions)
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.62-63,94), Edwards et al. (2010): "Indirect Land Use Change from Increased Biofuels Demand: Comparison of Models and Results for Marginal Biofuels Production from Different Feedstocks" JointResearchCenter - European Commission.	EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022" (p.26), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022" (p.40), Klepper et al.(2011): "Review of IFPRI study" (p.12-13)	

Sources: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies", Laborde et al. (2011): "Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty", JEC: Biofuel Programme (2011), (S&T)<sup>2</sup>-Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies", FAOStat (2011), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022", EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022", Klepper et al.(2011): "Review of IFPRI study", Greenpeace (2011): "Investigation on diesel, July 2011", Ufop (2011): „Sortenversuche 2010 mit Winterraps, Futtererbsen, Ackerbohnen und Sonnenblumen“.

**From:** [REDACTED]  
**Sent:** February 03, 2012 2:36 PM  
**To:** HEDEGAARD Connie (CAB-HEDEGAARD)  
**Co:** [REDACTED] IS [REDACTED] (CAB-HEDEGAARD); [REDACTED] (CLIMA); [REDACTED]  
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**Subject:** Letter addressed to Commissioner Hedegaard

Dear Commissioner,

Please find enclosed a letter regarding the IFPRI and JRC reports on the effects of Indirect Land Use Change (ILUC) relating to biofuels and bioliquids.

Best regards,

On behalf of [REDACTED]  
Secretary General

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Visit our web site :

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BI(12)661:2

Ms Connie HEDEGAARD  
Member of the European  
Commission  
200 Rue de la Loi  
B-1049 Brussels

Brussels, 3<sup>rd</sup> February 2012

**IFPRI and JRC reports on the effects of Indirect Land Use Change (ILUC) relating to biofuels and bioliquids (2011 update)**

Dear Commissioner,

Copa-Cogeca is aware of the reports commissioned by the EC from the International Food Policy Research Institute (IFPRI)<sup>1</sup> and the Joint Research Centre (JRC)<sup>2</sup> in order to evaluate the impact of indirect land use change on greenhouse gas emissions relating to biofuel demand in 2020. To summarise, on the basis of the results of the IFPRI report, the JRC calculates an average greenhouse gas emission value of 36g CO<sub>2</sub>/MJ/year from the effects of indirect land use change and values of 40 to 60g CO<sub>2</sub>/MJ/year for eight agricultural commodities.

According to information we have received, these reports are sufficient to begin an impact assessment with a view to a legislative proposal from the EC in 2012. In the light of this, Copa-Cogeca would like to make the following comments:

1. the IFPRI model cannot distinguish between direct and indirect land use change;
2. the modelling of the oilseed/oil/meal complex is inadequate;
3. the sustainability requirements laid down in directive 2009/28/EC are not taken into account;
4. the IFPRI model and the JRC method rely on a great deal of uncertainties and on inaccurate data (see appendix).

Copa-Cogeca therefore believes that the values proposed by the JRC for greenhouse gas emissions from the effects of ILUC are unreliable. Copa-Cogeca concludes that analysis of the real effects of indirect land use change remains impossible due to a lack of appropriate models or data.

For Copa-Cogeca, taking the JRC's proposed values into account in an EC legislative proposal would wipe out the investments and jobs created in rural areas in the EU through the development of the biofuel sector over the last 20 years and would not enable undesirable land use change in third countries to be reduced.

<sup>1</sup> Updated IFPRI report: "Assessing the Land Use Change Consequences of European Biofuel Policies - Final Report" (October 2011)

<sup>2</sup> New JRC report: "Estimate of GHG emissions from global land use change scenarios" (October 2011)

Overall, Copa-Cogeca believes that this attitude to the effects of ILUC is due both to a desire to eliminate biofuel production in the EU and to increase demand for imported biofuels in order to meet the targets set in the Fuel Quality Directive (2009/30/EC) and the Directive on the promotion of the use of energy from renewable sources (2009/28/EC), which would exacerbate direct land use change in third countries.



As a result, a broader approach is required in order to avoid undesirable variations in soil carbon stocks, as illustrated by the Commission's report of 22nd December 2010 (COM(2010)0811 final).

Copa-Cogeca encourages the EU to promote adequate protection of the environment in third countries affected by land use change bilaterally and multilaterally. For biofuels and bioliquids, this could be achieved through policy option no. 3, "introduce additional sustainability requirements on certain categories of biofuels", as proposed in the EC's report of 22nd December 2010.

This letter has also been sent to Mr Günther Oettinger and Mr Dacian Cioloș.

We hope that these comments will be granted your full consideration.

Yours sincerely,

  
  
Secretary General

CC:





## **Appendix: Copa-Cogeca's comments on the IFPRI and JRC reports**

In addition to the large number of uncertainties disclosed by the authors of the IFPRI report themselves, Copa-Cogeca would like to highlight the following specific points:

1. forecast for fuel demand in 2020: 316 Mtoe (IFPRI) compared to 281 Mtoe (JRC)
  2. cultivated land: 1.12 billion hectares (IFPRI) compared to 1.53 billion hectares (FAO)
  3. crop yields for newly cultivated land are underestimated
  4. complete interchangeability of different types of vegetable oil is inaccurate
  5. oil/by-product ratio is underestimated - ratio should be 42:55 for rapeseed
  6. percentage of palm oil in biodiesel mix is overestimated for Europe at 24% in 2020 given that it becomes a solid at below 22°C
  7. interpretation of increased demand for oil for biofuels in 2020 as increase in demand for palm oil only is inadequate
  8. covering 35% increase in demand for palm oil in 2020 through the conversion of peatlands in Indonesia is an overestimate
  9. greenhouse gas emission values for peatlands are overestimated in comparison with other sources such as the IPCC
-

(AGRI)

**From:** [REDACTED] (CAB-ASHTON) on behalf of ASHTON Catherine (CAB-ASHTON)  
**Sent:** mardi 24 avril 2012 18:19  
**To:** CAB ASHTON ARES  
**Subject:** FW: Green10 letter on biofuels and fossil fuels

**Attachments:** G10 letter to College of Commissioners\_Ashton.pdf



G10 letter to  
College of Commi...

-----Original Message-----

**From:** [REDACTED]  
**Sent:** Tuesday, April 24, 2012 6:16 PM  
**To:** ASHTON Catherine (CAB-ASHTON)  
**Cc:** [REDACTED] (CAB-ASHTON); [REDACTED] (CAB-ASHTON)  
**Subject:** Green10 letter on biofuels and fossil fuels

Dear Commissioner Ashton,

Please find attached a letter from the Green 10 coalition on the issue of biofuels and indirect-land use change and fossil fuels. This letter represents the collective position of the environmental NGO movement in Brussels. I would be grateful if you could take our views in consideration in advance of the College's debate on biofuels and indirect land use change next week.

I look forward to discussing the subject matter with Mr. Miguel Ceballos Baron in a meeting tomorrow afternoon, as we have agreed earlier by email.

Should you need any more information or have any questions about the content of this letter, please feel free to contact me by phone or email.

Best regards,

--

[REDACTED]  
Transport & Environment  
26, rue d'Edimbourg, Brussels

[REDACTED]  
[www.transportenvironment.org](http://www.transportenvironment.org)

The College of European Commissioners

24 April 2012

**RE: Biofuels and fossil fuels – Implementing the Fuel Quality and Renewable Energy Directives**

Dear Commissioner Ashton,

In the coming weeks, you will take two important decisions on assessing the carbon footprint of transport fuels. These decisions will determine whether the EU will be able to effectively shift the market to cleaner, more sustainable transport fuels, in line with its climate commitments.

We urge you to base these decisions on the best available science and agree on a robust methodology for both fossil fuels and biofuels. This means that the variation in the carbon intensity of fossil fuels should be reflected in a set of feedstock-based default values, including values for fuels produced from tar sands and oil shale, as proposed by the Commission in October 2011. For biofuels, the emissions from indirect land use change (ILUC) should be included for each feedstock.

The full and accurate accounting of the lifecycle emissions is critical for a meaningful comparison of climate impacts and for only channelling support to the least damaging fuels. This would also send a clear signal to companies that the EU is serious about the decarbonisation of transport.

**FOSSIL FUELS**

The Fuel Quality Directive requires a 6% reduction in the carbon intensity of road transport fuels between 2010 and 2020. Rules on how to calculate and report the carbon intensity of fossil fuels are still under discussion. In October 2011, the Commission presented a useful proposal including a set of carbon intensity default values for fuels produced from regular crude oil and a range of higher-carbon feedstock sources such as tar sands, oil shale, gas to liquid and, worst of all, coal to liquids. In February 2012, the EU's Fuel Quality Committee neither adopted nor rejected the draft law and so the proposal is being considered again by the Commission before being referred to the Environment Council.

**We urge you to maintain both the science-based default values and robust reporting requirements, as originally proposed.**

**BIOFUELS**

The Renewable Energy and Fuel Quality Directives also mandate the European Commission to review the impact of indirect land-use change on greenhouse gas emissions. All recent scientific research concludes that expanding the use of land-based biofuels, as presented in the national renewable energy action plans, will lead to significant knock-on ILUC effects, which could mean the destruction of vast areas of forests, savannahs and peatlands, thereby exacerbating the climate and biodiversity crises. It would also squeeze food supplies increasing the risk of food price volatility and food shortage.

Recent research carried out for the Commission by the Joint Research Centre and the International Food Policy Research Institute, concludes that pursuing the current national biofuel plans will generate additional carbon emissions from ILUC that could negate the carbon savings expected from the EU's green transport policy.

**We therefore urge the Commission to recognize the significance and scale of the ILUC impacts caused by biofuels as well as the robustness of the science and ILUC modelling.**

**We support the call made by over two hundreds scientists and economists in December 2011 asking you to assign specific values for different crops used to produce biofuels to take account of indirect land-use change (ILUC).**

**These so-called "ILUC factors" must be introduced under both the Fuel Quality Directive and Renewable Energy Directive in order to ensure policy coherence and clarity for investors. If ILUC factors are not also incorporated in the Renewable Energy Directive, member states might end up mandating the production of biofuels that do not have any value under the Fuel Quality Directive.**

Biofuels whose carbon footprint is worse or not significantly better than that of fossil fuels should not benefit from any kind of public support.

In the context of the EU's 2020 climate objectives and 2050 climate roadmap, we call upon the Commission to explore alternative approaches to decarbonising the transport sector in a way that is truly sustainable.

Yours sincerely,

[Redacted Signature]

[Redacted Name], Greenpeace European Unit

On behalf of:

[Redacted] – BirdLife International  
[Redacted] – Climate Action Network (CAN) Europe  
[Redacted] – CEE Bankwatch Network  
[Redacted] – European Environmental Bureau  
[Redacted] – Friends of the Earth Europe  
[Redacted] – Health & Environment Alliance  
[Redacted] – Naturfreunde Internationale  
[Redacted] – The European Federation for Transport and Environment (T&E)  
[Redacted] – WWF European Policy Office

Contact for further correspondence on this matter:

[Redacted] Greenpeace European Unit, on behalf of the Green 10  
Tel: [Redacted] E-mail: [Redacted]

CF: [REDACTED]

CC: [REDACTED]

[REDACTED]  
Secretary to the Director-General

**European Commission**

DG for Agriculture and Rural Development  
Directorate-General

[REDACTED]  
B-1049 Brussels/Belgium

[REDACTED]:@ec.europa.eu

---

**From:** SILVA RODRIGUEZ Jose Manuel (AGRI)

**Sent:** Thursday, March 01, 2012 3:32 PM

**To:** AGRI SECR DG

**Subject:** FW: letter for the attention of Ms Cathernine Day - Copa-Cogeca letter BI(12)1576 concerning Biofuels : iLUC factors based on the IFPRI report.

---

**From:** [REDACTED]

[REDACTED], March 01, 2012 3:31:23 PM

**CC:** SILVA RODRIGUEZ Jose Manuel (AGRI); R [REDACTED] s (MOVE);

S [REDACTED] (RTD)

**Subject:** letter for the attention of Ms Cathernine Day - Copa-Cogeca letter BI(12)1576 concerning Biofuels : iLUC factors based on the IFPRI report.

**Auto forwarded by a Rule**

Dear Madam,

Please find attached Copa-Cogeca letter BI(12)1576 concerning Biofuels : iLUC

factors based on the IFPRI report.

Yours faithfully,

On behalf of

---

[Redacted signature]

[Redacted signature]

Copa - Cogeca

Rue de Trèves 61

1040 Brussels

[Redacted signature]

Visit our web site :

[www.copa-cogeca.eu](http://www.copa-cogeca.eu)

Copa - European farmers

Cogeca - European agri-cooperatives



BI(12)1576:1

Ms Catherine Day  
Secretary General  
Secretariat-General  
European Commission  
200 rue de la Loi  
B-1040 Brussels

Brussels, 1<sup>st</sup> March 2012

**Re: Biofuels - iLUC factors based on the IFPRI report**

Dear Madam,

According to our information, the European Commission are currently discussing, amongst other matters, the inclusion of iLUC values in the greenhouse gas balance of biofuels. The report "**Assessing the Land Use Change Consequences of European Biofuel Policies**" published by the International Food Policy Research Institute (IFPRI) in October 2011 is apparently being used as a basis for this discussion. An overview of the uncertainties and errors in the MIRAGE-BioF model, some of which were identified by the author himself, is provided in attachment.

**1. LUC values**

According to the author, Mr Laborde, the model is not suitable for precisely estimating the extent of land use change and the resulting greenhouse gas emissions, due to data uncertainties.

Providing precise LUC values in the report (table 14, p. 59) directly contradicts the author's proviso.

**2. Prohibited land use change**

The fundamental basis of the model ignores measures taken by governments to prevent land use change. Protection measures stipulated in Directive 2009/28 such as bans on direct land use change are not taken into account. The result is that the model erroneously assumes that biofuels prohibited by Article 17 paras. 3 and 4 Directive 2009/28 that were produced from raw materials stemming from land such as primary forest, peatland, etc. are in fact accepted within the EU framework. The reason for this is that the model is unable to distinguish between direct and indirect land use change. As a result, the model estimates, for example, that approx. 70% of greenhouse gas emissions caused by land use change will come from the production of raw materials originating from peatland, forests and rainforests. Government measures that work to counteract direct and indirect land use change are also disregarded with no distinction. These are, however, extremely important. In Brazil, for example, the "Amazon Region Protected Areas (ARPA)" programme<sup>1</sup> brought about a decline in rainforest clearance by 75% from 28,000 km<sup>2</sup> in 2004 to 7,000 km<sup>2</sup> in 2010. The effect for the model is particularly critical because by far the greatest case of land use change is projected for Brazil (0.49 million ha), despite it being largely prohibited there. Future government protection measures are also ignored. Even if these measures cannot be projected with certainty, completely ruling them out is problematic. It must be assumed that measures undertaken by governments to protect land will give priority to land with particularly high carbon stocks, thus preventing high greenhouse gas emissions. Overall, it must be assumed that up to approx. 70% of the projected greenhouse gas

<sup>1</sup> [www.wwf.de](http://www.wwf.de)

emissions would be eliminated if government protection measures were taken into account. The model is therefore so flawed that not only is it not possible to predict quantities, a qualitative forecast, i.e. whether land use change is anticipated and, if so, which land use change as well as the resulting greenhouse gas emissions, would also be meaningless.

### **3. Data errors**

A particularly notable example of the use of inaccurate data in the model is the global cropland basis. For the 2008 baseline scenario, apparently modified results from a simulation by the MIRAGE-BioF model were used instead of the FAO's data for that year (1.53 billion ha). The supposed value of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. This would suggest that approx. 410 million ha of cropland has not been taken into account. This represents a data error of 27%.

### **4. Review**

The author of the IFPRI report rejected validation of the model by independent experts at a hearing organised on this issue by the Commission on 18<sup>th</sup> November 2011. In our opinion, this violates the basic rules of good scientific practice. Performing an external review of the model for its suitability to forecast land use change by applying it to a historic time period (for example, 2000 to 2010) where actual land use change is known is absolutely essential. These types of evaluations are, for example, a scientific standard of the IPCC.


To sum up, the number and significance of the uncertainties are so critical that the model is not suitable for assessing the impact of indirect land use change in accordance with Article 19 para. 6 of Directive 2009/28.

Copa-Cogeca rejects this report being used as the basis for a proposal, in view of Article 19 para. 6 of Directive 2009/28. The assumptions and data that the MIRAGE-BioF model is based on are so flawed that the model is unsuitable for forecasting greenhouse gas emissions brought about by land use change. If the IFPRI report is used as a basis, the iLUC values introduced into law on the greenhouse gas balance of biofuels would be arbitrary, given that the MIRAGE-BioF is not in a position to forecast land use change and the associated greenhouse gas emissions.

We hope these comments will be granted your full consideration.

Yours faithfully,



  
Secretary General

Copies:



Annex : BI(12)1585

BI(12)1585

<b><u>Analysis of the IFPRI report</u></b>		
<b><u>Results of the analysis</u></b>		
<p>The MIRAGE-BioF model used as a basis for the IFPRI report contains errors that are so numerous and critical that neither a quantitative nor a qualitative forecast is possible, i.e. whether land use change is anticipated and, if so, what kind as well as the resulting greenhouse gas emissions.</p>		
<p style="text-align: center;"> <b>“However, we also emphasize the critical uncertainties that prevent us from being able to provide a precise two-digit figure on the extent of land use change and associated emissions.”</b>  <b>Laborde et al. (2011)</b> </p> <p>The overview below contains a detailed list of "uncertainties" identified by the author as well as other errors and incorrect assumptions.</p>		
<b><u>Outline of the analysis</u></b>		
<b>1 to 6</b>	<b>Basic problems</b>	<b>Page 1</b>
<b>7 to 33</b>	<b>Uncertainties: 27 significant unreliable estimates</b>	<b>Pages 1 to 7</b>
<b>34 to 41</b>	<b>Data errors: 8 critical data errors</b>	<b>Page 8</b>
<b>42 to 47</b>	<b>Assumptions: 6 impermissible model assumptions</b>	<b>Pages 9 to 10</b>
	<b>Sources</b>	<b>Page 10</b>

<b>1. Basic problems</b>				2
	<b>IFPRI</b>	<b>Analysis</b>	<b>Error</b>	
1.	Transparency and reproducibility of MIRAGE-BioF	It is not possible for independent experts to validate the model calculations of the MIRAGE-BioF model.	Violation of the principles of scientific practice <sup>1</sup>	
2.	Absence of peer review	The quality of the model has not been evaluated by other scientists to date.		
3.	An evaluation/validation of the IFPRI model was refused by Mr Laborde.	Evaluation/validation: check of estimates for a historical period using real data		
4.	No distinction made between iLUC and dLUC. <i>"We do not distinguish between indirect or direct effects."</i>	Is not capable of forecasting indirect land use change	Emissions overestimated by up to 70% (p.21, figure 11 p.54)	
5.	Land use change prohibited by governments is ignored. <i>"It should be borne in mind that these results are obtained without any explicit modelling of the impact of the sustainability criteria in the RED ..."</i>	Nature conservation laws and, e.g. the European sustainability criteria, are not taken into account in the study.	Biofuels produced from raw materials from "no go areas" are accepted in the model (p.13).	
6.	The promotion of the use of degraded land is not taken into account in the model.	Violation of Directive 2009/28/EC	Bonus for crops grown on degraded land is counteracted.	

<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>
<b>Pages 24 to 27</b>		<b>Relevance</b>	
	I. <u>Uncertainties in relation to the additionally needed land</u>		
7.	Crops in the baseline scenario Biofuel yields per unit of feedstock	High	Results for crop yields (p.35,56) and biofuel production by feedstock (p.42,69).

<sup>1</sup> <http://www.leibniz-gemeinschaft.de> "Sicherstellen der Reproduzierbarkeit vor der Veröffentlichung (Kriterien der Wiederholbarkeit und Nachvollziehbarkeit) ebenso wie die Schaffung von Zugangsmöglichkeiten für berechtigte Dritte." ("Ensuring the Reproducibility Prior to Publication (Criteria of Reproducibility and Traceability) as well as the Creation of Access Possibilities for Authorized Third Parties.")

<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>	
	<i>"Crop yields in the baseline, biofuel yields per unit of feedstock. The higher the yield, the smaller the LUC. They depend on technology, which in the medium / long term depends on expected profitability. They can also be impacted by exogenous conditions (climate change...);"</i>			
8.	Crop yield response in the scenarios	High	Results for crop yields in the baseline scenario ( p.35) and worldwide production (p.40,43).	
	<i>"Crop yield response in the scenarios. The more yields react to crop price increases, the smaller the LUC. It depends on the price sensitivity of farm decisions (e.g. fertilizer, reduction in waste);"</i>			
9.	Crop yield on new cropland	High	Global production (see p.40).	
	<i>"Yield on new land. When crops expand into new land, yield depends on the quality of the new land, previous uses of that land and availability of services such as irrigation for the new area;"</i>			
10.	Supply response of farm inputs such as fertilizer		Results for intensification and land use change (p.55,68).	
	<i>"The supply response of farm inputs such as fertilizer. The less elastic the supply of farm inputs, the less elastic the crop supply. Effects on LUC can go either way."</i>			
11.	Demand response for raw materials	High	Results for demand (p.66-67).	
	<i>"The demand response for all the crops. If the price of crops increases, how will consumers react? How do intermediate sectors modify their demand for inputs? Do they substitute some inputs by others (e.g. cotton replaced by synthetic fibers, farm fishing using biofuels co-products like DDGS instead of other animal based meals?)? The more elastic the supply, the more limited the LUC."</i>			
12.	Degree of substitution among oil products (in particular the effects of peatland emissions)	High	Effects on the respective CO2 balance of biofuels (p.54,63) degree of substitution in the study results in major "leakage effects" (p.66-67,71).	
	<i>"A particular issue is the degree of substitution among vegetable oils. To what extent can rapeseed, sunflower, soybean and palm oil be substituted in the demand of different agents (households, industrial demand, biofuel production)? The higher the substitution, the larger the peatland effect – a large source of carbon emissions – for all biodiesel feedstocks."</i>			
13.	Livestock sector response: effects of the co- and by-products/feed composition/demand for meat	High	Results for feed prices (p.45,100) and degree of substitution for feed (p.64).	
	<i>"The livestock sector. It is important to single out livestock sector behavior due</i>			

<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>	
	to the role of co- and by-products of biofuels as feed for livestock. Could livestock production intensify? How flexible is the composition of the feed ration? And ultimately, how will this affect demand for meat?"			
14.	<p>Economic triggers of land use change:</p> <ol style="list-style-type: none"> <li>1. Option between different raw materials</li> <li>2. Expansion of cropland</li> </ol> <p><i>"Price sensitivity of land allocation decisions, i.e. the land elasticities in the model. It has two dimensions. First, can farmers re-allocate their land among different agricultural uses? It depends on the way prices will affect cropping decision under a set of technical (soil quality, needs for crop rotation) and behavioral (risk aversion of farmers and needs to keep a diversified portfolio of products) constraints. Second, the potential scope for farmers/ranchers to extend their agricultural land in new areas has a direct bearing on the LUC effect. If land extension is not possible due to the lack of suitable land, the high cost of accessing the new land (transport cost), the high cost of putting this new land into cultivation (needs of irrigation etc.), then land extension will be limited and biofuel demand will lead to higher agricultural prices and more constraints on the demand components, as well as more incentives for intensification;"</i></p>	High	Results (p.95-96).	
15.	<p>Globalisation: impact on international competition</p> <p><i>"How do business networks operate and to what extent is the supply chain exposed to international competition? It defines the possibility of importing foreign inputs. The LUC consequences depend on the extent to which trade facilitates the relocation of production from low to high yield regions, or the reverse;"</i></p>		Impact on model is not transparent. (see item 1)	
16.	<p>Relationship between global biofuel production and the price of crude oil</p> <p><i>"The global level of biofuel production and the level of oil prices. In the case of high oil prices, many countries can have profitable biofuel production at market prices (even without mandates). In this context, a stronger demand in Europe, driven by policy, will increase the price of biofuels, attract foreign production and at the same time deter foreign consumption (for the share not constrained by foreign mandates). In this case, EU demand does not necessarily lead to an increase in production of biofuels but just a reallocation of consumption at the world level, leading to minimized LUC effects;"</i></p>	High	Assumptions about the oil price (p.36,37) and development of the oil price (p.57).	



<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>
17.	<p>Macroeconomic factors such as exchange rates, direct investments, etc.</p> <p><i>"Macroeconomic conditions such as exchange rate, foreign direct investments, etc. For instance, if macroeconomic conditions leads to a strong real appreciation of the Brazilian currency compared to the US dollar, US ethanol is more competitive than Brazilian and EU demand patterns, both in the baseline and in the scenario, will be different, as well as the global land use pattern (even for non biofuel crops). If macroeconomic conditions favor farm expansion in regions with high yields and/or strong land market governance, the LUC effect will be reduced;"</i></p>		Assumptions and results of prices (p.36, 101-102).
18.	<p>Effects of economic development: future demand for agricultural products and land</p> <p><i>"Economic growth in the baseline and its consequences for the demand of agricultural products, for food and non food, and for land (urbanization). It affects the amount and quality of land when the policy shock is introduced. If land availability has been reduced, the LUC effect will be reduced, but if high quality land availability has been reduced first, it decreases marginal yield and leads to stronger LUC."</i></p>		Results for demand for raw material (p.83,86) and land (p.71).
19.	<p>Flexibility of biofuel policies: impact on investments in technology and yield improvements</p> <p><i>"Biofuel policies and their degree of flexibility. It impacts on the overall investment in biofuel technologies and yield improvements (creating positive externalities and reducing LUC for EU policies), the capacity of EU to use foreign production (see 8) but also the global pressure on land and agricultural markets in the baseline"</i></p>	High	Results for the impact of biofuel policies (p.37,44,85).
20.	<p>Trade policies can encourage or hinder competition</p> <p><i>"Trade policies that shift competitiveness among suppliers or can reduce the access of some producers to the EU market (e.g. antidumping, export restrictions);"</i></p>	High	Difference between the "No Trade Liberalization" and "Trade Liberalization" scenario (s.45-47,59).
21.	<p>"Land governance": can pressure on land in developing and emerging countries be regulated by the government</p> <p><i>"Land governance in the different countries and the capacity to enforce conservation programs that will limit the agricultural land expansion following</i></p>	High	The model ignores legislation to protect land (e.g. sustainability criteria of Directive 2009/28/EC (p.13).

<b>2. "Uncertainties" according to IFPRI</b>		<b>Effects on the results</b>	
	<i>a price increase;"</i>		
22.	Public investment in infrastructure <i>"Public investment in infrastructure (transportation, irrigation) to make new land more easily available (increase LUC, but at the same time improved irrigation on existing land also increases yield leading to reduction in the LUC);"</i>	High	Impact on model is not transparent. (see item 1)
23.	Public investment in biofuel research <i>"Public R&amp;D in new technologies to increase yields (at the crop level or at the biofuel conversion/crushing level) will reduce LUC (see item 1);"</i>		Development of the technology (p.56,60).
24.	Organic farming: lower degree of intensity <i>"Agricultural policies that promote less intensive schemes with lower yield production (e.g. organic farming). They will increase the LUC effect."</i>		Intensification (p.55).
25.	All policies that will impact economic conditions (refers to no.11) <i>"All policies that will have an impact macroeconomic conditions discussed in item (11)"</i>		Impact on model is not transparent. (see item 1)
<b>II. Uncertainties with respect to land conversion</b>			
26.	Localisation of land use change by a country and sub-region <i>"The country and sub-region where the land expansion takes place. This depends of the crop mix required and other factors affecting competitiveness (see items 7, 9...). Different regions have different biotopes and carbon stocks associated."</i>	High	Results on scope and type of converted land (p.48, 54) and localisation of converted land (p.50,70).
27.	Scope of conversion of pasture to cropland <i>"How easily can pasture be converted to crop land? If it is easy, cropland will extend more in pasture and it will mitigate the related emissions compared to deforestation."</i>	High	Distribution of the new cropland (p.51).
28.	Scope of conversion of forests to cropland <i>"How elastic is the demand for wood products and how easy is the conversion of managed forest to cropland?"</i>		Distribution of the new cropland (p.51).
29.	Calculation of CO <sub>2</sub> emissions by hectare and region <i>"What is the right average value of carbon stocks per hectare in a region? Does the use of averages (as done in this report) induce a bias? Is there a correlation between the initial carbon stock of an area and the potential crop yield? If so, when extension takes place, farmers will naturally targets high carbon stock"</i>	High	Results of CO <sub>2</sub> emissions (p.52-53,71) and assumptions (p.93-94).

<b>2. "Uncertainties" according to IFPRI</b>			<b>Effects on the results</b>
	<i>regions first, leading to increased LUC emissions. How to value recently afforested areas?"</i>		
30.	<p><b>Emissions from peatland</b></p> <p><i>"Peatland emissions. Among all source of emissions, the case of palm trees grown on peatland is among the most sensitive for our results. In recent years, estimates of carbon emissions from peatland have increased systematically and recent research gives a range of 50 to 120 tons of CO<sub>2</sub> / Ha / year."</i></p>	High	Assumptions for distribution (p.54) and effects on the respective CO <sub>2</sub> balance of the biofuels (p.63,71).
31.	<p><b>Agricultural practices in 2020</b></p> <p><i>"What will be the agronomic practices in 2020 on the new land? Different depth for tillage leads to different emissions of mineral carbon stored in the soil and can significantly reduce overall emissions. It depends of the availability of technology but also the capacity to adopt them (e.g. Genetically Modified soybean with Round-up and no tilling)"</i></p>	High	Impact on model is not transparent. (see item 1)
<b>III. Political uncertainties</b>			
32.	<p><b>Legislation and enforcement for land protection</b></p> <p><i>"Any land management policies will have an impact on the type of land that can, or can not, be converted. Legislation, and even more importantly its enforcement, play a critical role in protecting high carbon value areas (conservation programs, forestry code. etc.). Analysis of past behavior through satellite images is a relevant exercise but the margin of errors in such exercise is also very large;"</i></p>		The model ignores legislation such as EU cross compliance
33.	<p><b>Legislation in the agricultural sector</b></p> <p><i>"Regulations affecting the agricultural sector: animal welfare, land set aside etc, may influence the type of land converted (pasture vs forest etc.);"</i></p>		Impact on model is not transparent. (see item 1)

### 3.Data errors

	IFPRI	Analysis	Error
34.	Global cropland in the baseline scenario 2008 1.12 billion hectares (MIRAGE-BioF)	Laborde et al. 2011: MIRAGE-BioF simulation: 1.24 billion ha in 2008 Monfreda et al. 2008: 1.29 billion ha in 2000 Global cropland according to FAO in 2008 1.53 billion ha	The value supposedly used of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. Underestimated by 410,000,000 hectares in the baseline scenario
	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 19)	Source: FAOStat (2011): <a href="http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor">http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor</a>	
35.	Forecast of fuel demand for 2020 at 316 Mtoe	Forecast for 2020 according to JEC 2011: 281 Mtoe	35,000.000 toe overestimated in the forecast for 2020
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: JEC Biofuel Programme (2011): <a href="http://ies.jrc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf">http://ies.jrc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf</a> (p.20)	
36.	Forecasts for crop yields in 2020	Crop yields significantly underestimated on new cropland	Forecasts of crops underestimated between 25% and 50%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40)	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 31)	
37.	Nature conservation: legislation and regulations	European sustainability requirements are not taken into account	Forest clearances overestimated by 660,000 ha
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.13,56)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.13,56)	
38.	Crop rotation and multicropping	Multicropping is not taken into account in the model	Multicropping underestimated on 150,000,000 ha
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (S.85)	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)	
39.	Forecast of oil price for 2020 (\$110)	Model result shows a falling oil price 0.94%	Model result

	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36), Laborde et al. (2011): Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty" (S.12)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.57)	contradicts all known forecasts
40.	Baseline scenario 2008: according to IFPRI percentage of soybean in European biodiesel 24%	Soybean in German biodiesel maximum 8%	Soybean percentage overestimated by 67%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40)	Source: Greenpeace (2011): Investigation on diesel, July 2011	
41.	Oil content of rapeseed: 0.35t vegetable oil per tonne of rapeseed according to IFPRI	Vegetable oil per tonne of rapeseed 44%	Oil content underestimated by 26%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.100)	Source: Ufop (2011): „Sortenversuche 2010 mit Winterraps, Futtererbsen, Ackerbohnen und Sonnenblumen" (S.24,25)	

#### 4. Mistaken assumptions

	IFPRI	Analysis	Error
42.	Import demand: EU by bioethanol demand for 2020 will be covered up to 91% by Brazilian bioethanol imports (BAU 48%)	IFPRI thus forecasts growth in cropland of 11% for Brazil although Brazil currently imports bioethanol.	Bioethanol imports from Brazil overestimated by 6,825,000 toe
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36,38-39)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36)	
43.	2020 target: Additional biofuel demand of 15.5 Mtoe for the year 2020	Biofuel demand increases in a "BigBang in a single year by +132%.	The effects of changes such as increased efficiency underestimated
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	
44.	High land rents result in new land being converted to cropland (land use change)	Mistaken assumption: the correlation between high land rents and land use change is statistically not significant.	Land use change overestimated.
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.104), Klepper et al. (2011): "Review of IFPRI study" (p.7)	Klepper et al. (2011): "Review of IFPRI study" (p.7)	
45.	Modelling the "oilseed sector" not transparent: mistaken	Inaccurate production ratio between oils and co-	Land use change

	focus on the fuel sector, food sector not adequately accounted for.	products as well as the demand for vegetable oils as food	based on biodiesel demand overestimated
	<i>IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.99,106)</i>	<i>(S&amp;T)<sup>2</sup>-Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)</i>	
46.	Substitution: high degree of substitution in the model means that demand for vegetable oils always leads to increasing demand for palm oil.	Mistaken assumption: vegetable oils cannot be completely substituted. Standard specifications have to be taken into account for biofuels.	
	<i>IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40,59,69)</i>	<i>(S&amp;T)<sup>2</sup>-Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 34)</i>	
47.	Scope of land use change caused by palm oil: 33% on "peatlands" (Indonesia and Malaysia)	New studies show that the assumption of 33% made by Edwards is inaccurate: 13% in Indonesia and 9% in Malaysia	Peatland emissions overestimated (34% of the biodiesel emissions)
	<i>Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.62-63,94), Edwards et al. (2010): "Indirect Land Use Change from Increased Biofuels Demand: Comparison of Models and Results for Marginal Biofuels Production from Different Feedstocks" JointResearchCenter - European Commission.</i>	<i>EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022" (p.26), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022" (p.40), Klepper et al.(2011): "Review of IFPRI study" (p.12-13)</i>	

**Sources:** *IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies", Laborde et al. (2011): "Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty", JEC: Biofuel Programme (2011), (S&T)<sup>2</sup>-Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies", FAOStat (2011), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022", EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022", Klepper et al.(2011): "Review of IFPRI study", Greenpeace (2011): "Investigation on diesel, July 2011", Ufop (2011): „Sortenversuche 2010 mit Winterraps, Futtererbsen, Ackerbohnen und Sonnenblumen“.*

**copa\*cogeca**

european farmers

european agri-cooperatives

BI(12)1576:1



Mr. José Manuel SILVA  
RODRIGUEZ  
Director-General for Agriculture  
and Rural development  
European Commission  
200 rue de la Loi  
B-1040 Brussels

Brussels, 2<sup>nd</sup> March 2012

**Re: Biofuels - iLUC factors based on the IFPRI report**

Dear Sir,

According to our information, the European Commission are currently discussing, amongst other matters, the inclusion of iLUC values in the greenhouse gas balance of biofuels. The report **"Assessing the Land Use Change Consequences of European Biofuel Policies"** published by the International Food Policy Research Institute (IFPRI) in October 2011 is apparently being used as a basis for this discussion. An overview of the uncertainties and errors in the MIRAGE-BioF model, some of which were identified by the author himself, is provided in attachment.

#### 1. LUC values

According to the author, [REDACTED], the model is not suitable for precisely estimating the extent of land use change and the resulting greenhouse gas emissions, due to data uncertainties.

Providing precise LUC values in the report (table 14, p. 59) directly contradicts the author's proviso.

#### 2. Prohibited land use change

The fundamental basis of the model ignores measures taken by governments to prevent land use change. Protection measures stipulated in Directive 2009/28 such as bans on direct land use change are not taken into account. The result is that the model erroneously assumes that biofuels prohibited by Article 17 paras. 3 and 4 Directive 2009/28 that were produced from raw materials stemming from land such as primary forest, peatland, etc. are in fact accepted within the EU framework. The reason for this is that the model is unable to distinguish between direct and indirect land use change. As a result, the model estimates, for example, that approx. 70% of greenhouse gas emissions caused by land use change will come from the production of raw materials originating from peatland, forests and rainforests. Government measures that work to counteract direct and indirect land use change are also disregarded with no distinction. These are, however, extremely important. In Brazil, for example, the "Amazon Region Protected Areas (ARPA)" programme<sup>1</sup> brought about a decline in rainforest clearance by 75% from 28,000 km<sup>2</sup> in 2004 to 7,000 km<sup>2</sup> in 2010. The effect for the model is particularly critical because by far the greatest case of land use change is projected for Brazil (0.49 million ha), despite it being largely prohibited there. Future government protection measures are also ignored. Even if these measures cannot be projected with certainty, completely ruling them out is problematic. It must be assumed that measures undertaken by governments to protect land will give priority to land with particularly high carbon stocks, thus preventing high greenhouse gas emissions.

<sup>1</sup> [www.wwf.de](http://www.wwf.de)

Overall, it must be assumed that up to approx. 70% of the projected greenhouse gas emissions would be eliminated if government protection measures were taken into account. The model is therefore so flawed that not only is it not possible to predict quantities, a qualitative forecast, i.e. whether land use change is anticipated and, if so, which land use change as well as the resulting greenhouse gas emissions, would also be meaningless.

### 3. Data errors

A particularly notable example of the use of inaccurate data in the model is the global cropland basis. For the 2008 baseline scenario, apparently modified results from a simulation by the MIRAGE-BioF model were used instead of the FAO's data for that year (1.53 billion ha). The supposed value of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. This would suggest that approx. 410 million ha of cropland has not been taken into account. This represents a data error of 27%.

### 4. Review

The author of the IFPRI report rejected validation of the model by independent experts at a hearing organised on this issue by the Commission on 18<sup>th</sup> November 2011. In our opinion, this violates the basic rules of good scientific practice. Performing an external review of the model for its suitability to forecast land use change by applying it to a historic time period (for example, 2000 to 2010) where actual land use change is known is absolutely essential. These types of evaluations are, for example, a scientific standard of the IPCC.

To sum up, the number and significance of the uncertainties are so critical that the model is not suitable for assessing the impact of indirect land use change in accordance with Article 19 para. 6 of Directive 2009/28.

Copa-Cogeca rejects this report being used as the basis for a proposal, in view of Article 19 para. 6 of Directive 2009/28. The assumptions and data that the MIRAGE-BioF model is based on are so flawed that the model is unsuitable for forecasting greenhouse gas emissions brought about by land use change. If the IFPRI report is used as a basis, the iLUC values introduced into law on the greenhouse gas balance of biofuels would be arbitrary, given that the MIRAGE-BioF is not in a position to forecast land use change and the associated greenhouse gas emissions.

We hope these comments will be granted your full consideration.

Yours faithfully,

CC:

Annex : BI(12)1585



## **Analysis of the IFPRI report**

### **Results of the analysis**

The MIRAGE-BioF model used as a basis for the IFPRI report contains errors that are so numerous and critical that neither a quantitative nor a qualitative forecast is possible, i.e. whether land use change is anticipated and, if so, what kind as well as the resulting greenhouse gas emissions.

**"However, we also emphasize the critical uncertainties that prevent us from being able to provide a precise two-digit figure on the extent of land use change and associated emissions."**

**Laborde et al. (2011)**

The overview below contains a detailed list of "uncertainties" identified by the author as well as other errors and incorrect assumptions.

### **Outline of the analysis**

1 to 6	Basic problems	Page 1
7 to 33	Uncertainties: 27 significant unreliable estimates	Pages 1 to 7
34 to 41	Data errors: 8 critical data errors	Page 8
42 to 47	Assumptions: 6 impermissible model assumptions	Pages 9 to 10
	Sources	Page 10

1. Basic problems				2
	IFPRI	Analysis	Error	
1.	Transparency and reproducibility of MIRAGE-BioF	It is not possible for independent experts to validate the model calculations of the MIRAGE-BioF model.	Violation of the principles of scientific practice <sup>1</sup>	
2.	Absence of peer review	The quality of the model has not been evaluated by other scientists to date.		
3.	An evaluation/validation of the IFPRI model was refused by Mr Laborde.	Evaluation/validation: check of estimates for a historical period using real data		
4.	No distinction made between iLUC and dLUC. <i>"We do not distinguish between indirect or direct effects."</i>	Is not capable of forecasting indirect land use change	Emissions overestimated by up to 70% (p.21, figure 11 p.54)	
5.	Land use change prohibited by governments is ignored. <i>"It should be borne in mind that these results are obtained without any explicit modelling of the impact of the sustainability criteria in the RED"</i>	Nature conservation laws and, e.g. the European sustainability criteria, are not taken into account in the study.	Biofuels produced from raw materials from "no go areas" are accepted in the model (p.13).	
6.	The promotion of the use of degraded land is not taken into account in the model.	Violation of Directive 2009/28/EC	Bonus for crops grown on degraded land is counteracted.	

2. "Uncertainties" according to IFPRI			Effects on the results
Pages 24 to 27		Relevance	
I. <u>Uncertainties in relation to the additionally needed land</u>			
7.	Crops in the baseline scenario Biofuel yields per unit of feedstock	High	Results for crop yields (p.35,56) and biofuel production by feedstock (p.42,69).

<sup>1</sup> <http://www.leibniz-gemeinschaft.de> "Sicherstellen der Reproduzierbarkeit vor der Veröffentlichung (Kriterien der Wiederholbarkeit und Nachvollziehbarkeit) ebenso wie die Schaffung von Zugangsmöglichkeiten für berechnete Dritte." ("Ensuring the Reproducibility Prior to Publication (Criteria of Reproducibility and Traceability) as well as the Creation of Access Possibilities for Authorized Third Parties.")

2. "Uncertainties" according to IFPRI		Effects on the results	
	<i>"Crop yields in the baseline, biofuel yields per unit of feedstock. The higher the yield, the smaller the LUC. They depend on technology, which in the medium / long term depends on expected profitability. They can also be impacted by exogenous conditions (climate change...);"</i>		
8.	Crop yield response in the scenarios <i>"Crop yield response in the scenarios. The more yields react to crop price increases, the smaller the LUC. It depends on the price sensitivity of farm decisions (e.g. fertilizer, reduction in waste);"</i>	High	Results for crop yields in the baseline scenario ( p.35) and worldwide production (p.40,43).
9.	Crop yield on new cropland <i>"Yield on new land. When crops expand into new land, yield depends on the quality of the new land, previous uses of that land and availability of services such as irrigation for the new area;"</i>	High	Global production (see p.40).
10.	Supply response of farm inputs such as fertilizer <i>"The supply response of farm inputs such as fertilizer. The less elastic the supply of farm inputs, the less elastic the crop supply. Effects on LUC can go either way."</i>		Results for intensification and land use change (p.55,68).
11.	Demand response for raw materials <i>"The demand response for all the crops. If the price of crops increases, how will consumers react? How do intermediate sectors modify their demand for inputs? Do they substitute some inputs by others (e.g. cotton replaced by synthetic fibers, farm fishing using biofuels co-products like DDGS instead of other animal based meals?)? The more elastic the supply, the more limited the LUC."</i>	High	Results for demand (p.66-67).
12.	Degree of substitution among oil products (in particular the effects of peatland emissions) <i>"A particular issue is the degree of substitution among vegetable oils. To what extent can rapeseed, sunflower, soybean and palm oil be substituted in the demand of different agents (households, industrial demand, biofuel production)? The higher the substitution, the larger the peatland effect – a large source of carbon emissions – for all biodiesel feedstocks."</i>	High	Effects on the respective CO2 balance of biofuels (p.54,63) degree of substitution in the study results in major "leakage effects" (p.66-67,71).
13.	Livestock sector response: effects of the co- and by-products/feed composition/demand for meat <i>"The livestock sector. It is important to single out livestock sector behavior due</i>	High	Results for feed prices (p.45,100) and degree of substitution for feed (p.64).

<b>2. "Uncertainties" according to IFPRI</b>		<b>Effects on the results</b>	
	to the role of co- and by-products of biofuels as feed for livestock. Could livestock production intensify? How flexible is the composition of the feed ration? And ultimately, how will this affect demand for meat?"		
<b>14.</b>	<p>Economic triggers of land use change:</p> <ol style="list-style-type: none"> <li>1. Option between different raw materials</li> <li>2. Expansion of cropland</li> </ol> <p><i>"Price sensitivity of land allocation decisions, i.e. the land elasticities in the model. It has two dimensions. First, can farmers re-allocate their land among different agricultural uses? It depends on the way prices will affect cropping decision under a set of technical (soil quality, needs for crop rotation) and behavioral (risk aversion of farmers and needs to keep a diversified portfolio of products) constraints. Second, the potential scope for farmers/ranchers to extend their agricultural land in new areas has a direct bearing on the LUC effect. If land extension is not possible due to the lack of suitable land, the high cost of accessing the new land (transport cost), the high cost of putting this new land into cultivation (needs of irrigation etc.), than land extension will be limited and biofuel demand will lead to higher agricultural prices and more constraints on the demand components, as well as more incentives for intensification;"</i></p>	High	Results (p.95-96).
<b>15.</b>	<p>Globalisation: impact on international competition</p> <p><i>"How do business networks operate and to what extent is the supply chain exposed to international competition? It defines the possibility of importing foreign inputs. The LUC consequences depend on the extent to which trade facilitates the relocation of production from low to high yield regions, or the reverse;"</i></p>		Impact on model is not transparent. (see item 1)
<b>16.</b>	<p>Relationship between global biofuel production and the price of crude oil</p> <p><i>"The global level of biofuel production and the level of oil prices. In the case of high oil prices, many countries can have profitable biofuel production at market prices (even without mandates). In this context, a stronger demand in Europe, driven by policy, will increase the price of biofuels, attract foreign production and at the same time deter foreign consumption (for the share not constrained by foreign mandates). In this case, EU demand does not necessarily lead to an increase in production of biofuels but just a reallocation of consumption at the world level, leading to minimized LUC effects;"</i></p>	High	Assumptions about the oil price (p.36,37) and development of the oil price (p.57).

2. "Uncertainties" according to IEPRI		Effects on the results	
17.	<p>Macroeconomic factors such as exchange rates, direct investments, etc.</p> <p><i>"Macroeconomic conditions such as exchange rate, foreign direct investments, etc. For instance, if macroeconomic conditions leads to a strong real appreciation of the Brazilian currency compared to the US dollar, US ethanol is more competitive than Brazilian and EU demand patterns, both in the baseline and in the scenario, will be different, as well as the global land use pattern (even for non biofuel crops). If macroeconomic conditions favor farm expansion in regions with high yields and/or strong land market governance, the LUC effect will be reduced."</i></p>		Assumptions and results of prices (p.36, 101-102):
18.	<p>Effects of economic development: future demand for agricultural products and land</p> <p><i>"Economic growth in the baseline and its consequences for the demand of agricultural products, for food and non food, and for land (urbanization). It affects the amount and quality of land when the policy shock is introduced. If land availability has been reduced, the LUC effect will be reduced, but if high quality land availability has been reduced first, it decreases marginal yield and leads to stronger LUC."</i></p>		Results for demand for raw material (p.83,86) and land (p.71).
19.	<p>Flexibility of biofuel policies: impact on investments in technology and yield improvements</p> <p><i>"Biofuel policies and their degree of flexibility. It impacts on the overall investment in biofuel technologies and yield improvements (creating positive externalities and reducing LUC for EU policies), the capacity of EU to use foreign production (see 8) but also the global pressure on land and agricultural markets in the baseline"</i></p>	High	Results for the impact of biofuel policies (p.37,44,85).
20.	<p>Trade policies can encourage or hinder competition</p> <p><i>"Trade policies that shift competitiveness among suppliers or can reduce the access of some producers to the EU market (e.g. antidumping, export restrictions)."</i></p>	High	Difference between the "No Trade Liberalization" and "Trade Liberalization" scenario (s.45-47,59).
21.	<p>"Land governance": can pressure on land in developing and emerging countries be regulated by the government</p> <p><i>"Land governance in the different countries and the capacity to enforce conservation programs that will limit the agricultural land expansion following"</i></p>	High	The model ignores legislation to protect land (e.g. sustainability criteria of Directive 2009/28/EC (p.13).

2. "Uncertainties" according to IFPRI		Effects on the results	
	<i>a price increase;</i>		
22.	Public investment in infrastructure <i>"Public investment in infrastructure (transportation, irrigation) to make new land more easily available (increase LUC, but at the same time improved irrigation on existing land also increases yield leading to reduction in the LUC);"</i>	High	Impact on model is not transparent. (see item 1)
23.	Public investment in biofuel research <i>"Public R&amp;D in new technologies to increase yields (at the crop level or at the biofuel conversion/crushing level) will reduce LUC (see item 1);"</i>		Development of the technology (p.56,60).
24.	Organic farming: lower degree of intensity <i>"Agricultural policies that promote less intensive schemes with lower yield production (e.g. organic farming). They will increase the LUC effect."</i>		Intensification (p.55).
25.	All policies that will impact economic conditions (refers to no.11) <i>"All policies that will have an impact macroeconomic conditions discussed in item (11)"</i>		Impact on model is not transparent. (see item 1)
II. <u>Uncertainties with respect to land conversion</u>			
26.	Localisation of land use change by a country and sub-region <i>"The country and sub-region where the land expansion takes place. This depends of the crop mix required and other factors affecting competitiveness (see items 7, 9...). Different regions have different biotopes and carbon stocks associated."</i>	High	Results on scope and type of converted land (p.48, 54) and localisation of converted land (p.50,70).
27.	Scope of conversion of pasture to cropland <i>"How easily can pasture be converted to crop land? If it is easy, cropland will extend more in pasture and it will mitigate the related emissions compared to deforestation."</i>	High	Distribution of the new cropland (p.51).
28.	Scope of conversion of forests to cropland <i>"How elastic is the demand for wood products and how easy is the conversion of managed forest to cropland?"</i>		Distribution of the new cropland (p.51).
29.	Calculation of CO <sub>2</sub> emissions by hectare and region <i>"What is the right average value of carbon stocks per hectare in a region? Does the use of averages (as done in this report) induce a bias? Is there a correlation between the initial carbon stock of an area and the potential crop yield? If so, when extension takes place, farmers will naturally targets high carbon stock"</i>	High	Results of CO <sub>2</sub> emissions (p.52-53,71) and assumptions (p.93-94).

2. "Uncertainties" according to IFPRI		Effects on the results	
	regions first, leading to increased LUC emissions. How to value recently afforested areas?"		
30.	<p>Emissions from peatland</p> <p>"Peatland emissions. Among all source of emissions, the case of palm trees grown on peatland is among the most sensitive for our results. In recent years, estimates of carbon emissions from peatland have increased systematically and recent research gives a range of 50 to 120 tons of CO<sub>2</sub> / Ha / year."</p>	High	Assumptions for distribution (p.54) and effects on the respective CO <sub>2</sub> balance of the biofuels (p.63,71).
31.	<p>Agricultural practices in 2020</p> <p>"What will be the agronomic practices in 2020 on the new land? Different depth for tillage leads to different emissions of mineral carbon stored in the soil and can significantly reduce overall emissions. It depends of the availability of technology but also the capacity to adopt them (e.g. Genetically Modified soybean with Round-up and no tilling)"</p>	High	Impact on model is not transparent. (see item 1)
III. Political uncertainties			
32.	<p>Legislation and enforcement for land protection</p> <p>"Any land management policies will have an impact on the type of land that can, or can not, be converted. Legislation, and even more importantly its enforcement, play a critical role in protecting high carbon value areas (conservation programs, forestry code. etc.). Analysis of past behavior through satellite images is a relevant exercise but the margin of errors in such exercise is also very large;"</p>		The model ignores legislation such as EU cross compliance
33.	<p>Legislation in the agricultural sector</p> <p>"Regulations affecting the agricultural sector: animal welfare, land set aside etc, may influence the type of land converted (pasture vs forest etc.)."</p>		Impact on model is not transparent. (see item 1)



### 3.Data errors

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34.	Global cropland in the baseline scenario 2008 1.12 billion hectares (MIRAGE-BioF)	Laborde et al. 2011: MIRAGE-BioF simulation: 1.24 billion ha in 2008 Monfreda et al. 2008: 1.29 billion ha in 2000 Global cropland according to FAO in 2008 1.53 billion ha	The value supposedly used of 1.12 billion ha is not the result of the studies cited in this respect by the author and others. Underestimated by 410,000,000 hectares in the baseline scenario
	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 19)	Source: FAOStat (2011): <a href="http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor">http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor</a>	
35.	Forecast of fuel demand for 2020 at 316 Mtoe	Forecast for 2020 according to JEC 2011: 281 Mtoe	35,000.000 toe overestimated in the forecast for 2020
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: JEC Biofuel Programme (2011): <a href="http://ies.irc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf">http://ies.irc.ec.europa.eu/uploads/jec/JEC%20Biofuels%20Programme.pdf</a> (p.20)	
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	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (S.85)	Source: (S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)	
39.	Forecast of oil price for 2020 (\$110)	Model result shows a falling oil price 0.94%	Model result



	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36), Laborde et al. (2011): "Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty" (S.12)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.57)	contradicts all known forecasts
40.	Baseline scenario 2008: according to IFPRI percentage of soybean in European biodiesel 24%	Soybean in German biodiesel maximum 8%	Soybean percentage overestimated by 67%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40)	Source: Greenpeace (2011): "Investigation on diesel, July 2011"	
41.	Oil content of rapeseed: 0.35t vegetable oil per tonne of rapeseed according to IFPRI	Vegetable oil per tonne of rapeseed 44%	Oil content underestimated by 26%
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.100)	Source: Ufop (2011): "Sortenversuche 2010 mit Winterraps, Futtererbsen, Ackerbohnen und Sonnenblumen" (S.24,25)	

#### 4. Mistaken assumptions

	IFPRI	Analysis	Error
42.	Import demand: EU by bioethanol demand for 2020 will be covered up to 91% by Brazilian bioethanol imports (BAU 48%)	IFPRI thus forecasts growth in cropland of 11% for Brazil although Brazil currently imports bioethanol.	Bioethanol imports from Brazil overestimated by 6,825,000 toe
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36,38-39)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.36)	
43.	2020 target: Additional biofuel demand of 15.5 Mtoe for the year 2020	Biofuel demand increases in a "BigBang in a single year by +132%.	The effects of changes such as increased efficiency underestimated
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.37)	
44.	High land rents result in new land being converted to cropland (land use change)	Mistaken assumption: the correlation between high land rents and land use change is statistically not significant.	Land use change overestimated.
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.104), Klepper et al. (2011): "Review of IFPRI study" (p.7)	Klepper et al. (2011): "Review of IFPRI study" (p.7)	
45.	Modelling the "oilseed sector" not transparent: mistaken	Inaccurate production ratio between oils and co-	Land use change

	focus on the fuel sector, food sector not adequately accounted for.	products as well as the demand for vegetable oils as food	based on biodiesel demand overestimated
	IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.99,106)	(S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 44)	
46.	Substitution: high degree of substitution in the model means that demand for vegetable oils always leads to increasing demand for palm oil.	Mistaken assumption: vegetable oils cannot be completely substituted. Standard specifications have to be taken into account for biofuels.	
	IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.40,59,69)	(S&T) <sup>2</sup> -Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies" (p. 34)	
47.	Scope of land use change caused by palm oil: 33% on "peatlands" (Indonesia and Malaysia)	New studies show that the assumption of 33% made by Edwards is inaccurate: 13% in Indonesia and 9% in Malaysia	Peatland emissions overestimated (34% of the biodiesel emissions)
	Source: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies" (p.62-63,94), Edwards et al. (2010): "Indirect Land Use Change from Increased Biofuels Demand: Comparison of Models and Results for Marginal Biofuels Production from Different Feedstocks" JointResearchCenter - European Commission.	EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022" (p.26), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022" (p.40), Klepper et al.(2011): "Review of IFPRI study" (p.12-13)	

Sources: IFPRI (2011): "Assessing the Land Use Change Consequences of European Biofuel Policies", Laborde et al. (2011): "Assessing the EU biofuel land use change effects: estimates with the MIRAGE-BioF model and uncertainty", JEC: Biofuel Programme (2011), (S&T)<sup>2</sup>-Consultants (2011): "Review of IFPRI Reports on Land Use Change from European Biofuel Policies", FAOStat (2011), EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Indonesia, 2000 to 2022", EPA (2011): "Spatial Modeling of Future Oil Palm Expansion in Malaysia, 2003 to 2022", Klepper et al.(2011): "Review of IFPRI study", Greenpeace (2011): "Investigation on diesel, July 2011", Ufop (2011): „Sortenversuche 2010 mit Winterraps, Futtererbsen, Ackerbohnen und Sonnenblumen“.

**From:** [REDACTED]  
**Sent:** Tuesday, March 20, 2012 3:33 PM  
**To:** HEDEGAARD Connie (CAB-HEDEGAARD)  
**Cc:** [REDACTED] (CAB-HEDEGAARD); [REDACTED] (CAB-HEDEGAARD)  
**Subject:** Biofuels and Indirect Land Use Change

Dear Commissioner Hedegaard,

Please find attached a letter [REDACTED] the European Oilseed Alliance (EOA), and [REDACTED] the European Oilseed Alliance (EOA), about indirect land use change (ILUC).

A copy of this letter is also being sent to you by mail.

Yours sincerely,

[REDACTED]

[REDACTED]

mob.

tel.

**[www.gpluseurope.com](http://www.gpluseurope.com)**

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Ms Connie Hedegaard  
Commissioner for Climate Change

Brussels, 20<sup>th</sup> March 2012

**Subject: Biofuels and Indirect Land Use Change (ILUC)**

Dear Commissioner,

For several months, the Commission's services have carried out a study on the impact of biofuels on Indirect Land Use Change (ILUC), as was envisaged in the Renewable Energy Directive (RED). It is clear today that in spite of efforts undertaken, there is no reliable scientific or technical data able to give a clear-cut answer to the ILUC issue. It is, without doubt, the reason why an orientation debate could be organised for the College of Commissioners. The future of the RED is indeed at stake.

Experts approached by professionals of the European Oilseed Sector gathered in the trade association EOA (European Oilseed Alliance), believe that the characterisation of the models, but also the parameters used, lead to non-exploitable results.

They especially emphasise the following elements in the studies which lay the foundation for the Commission's approach:

- An undervaluation of land availability: 500 Million hectares of land dedicated to temporary forage and fallow were not taken into account;
- A very poor modelling of oilseed crushing, but also an assessment of the vegetable protein use in animal feeds not adapted to the European situation (i.e. under-estimation of the replacement of rapeseed and sunflower cakes by soya-bean cakes);
- Very conservative yield hypotheses whereas anticipated high prices will lead to higher yield increases than in previous decades;
- The questionable addition of an Indonesian peatlands effect – the share of peatlands in expected palm expansion is very much overvalued in comparison with other available studies. Moreover, the use of palm in biofuels is very limited.

As a result, the ILUC impact of biodiesel would be significantly overvalued, up to nearly 80%.

If the Commission were to introduce an ILUC factor on the basis of existing studies, we fear that serious scientific uncertainties would tarnish the decision, making it unacceptable.

Such a decision would shatter the decade-long achievements of the biodiesel industry:

- The biodiesel industry is today the main source of biofuels in Europe. The end of biodiesel production in Europe would jeopardize the objective of 10% renewable energy in transport by 2020. Today for example, biodiesel accounts for 5 to 7% of the needs in diesel.
- Europe's imports of protein-rich oilseed-cakes would significantly increase. Biofuels have triggered the development of oilseed production leading to the joint production of significant quantities of vegetable proteins for animal feed. These protein rich materials have replaced South American soya-cakes thereby reducing Europe's import dependency. In 10 years, Europe's self-sufficiency has improved from 25% to nearly 40%. In France, over the same period this rate has gone from 25% to 55%.
- While ambitious European objectives remain absolutely desirable, a decline in European production would lead to an increase in biofuel imports from third countries. This would increase direct land use change in those countries, especially as the sustainability of their exports to the EU market should be better controlled.
- The end of the biodiesel sector in Europe would have a devastating impact on jobs and economic activity in rural areas.
- Lastly, biofuel production would consolidate outside Europe, especially on the American continent, which would run counter to the G20 objectives to balance world agriculture production and would have a very negative impact on biodiversity.

**This is the reason why we ask that scientific and technical arrangements be taken so that the topic of ILUC be studied at an international level with the appropriate means.**

During this necessary period of more in-depth scientific analysis, the Commission, out of precaution, could consider an anticipated increase in thresholds for greenhouse gas emissions reductions in the context of the existing calendar (i.e. 35% today until 2017, 50% in 2017 and 60% for units built after 2017). This decision could lead to raising thresholds from 35% to 45% for example.

Lastly, bearing in mind that the ILUC effect, international by nature, must be assessed jointly by the whole scientific community, we suggest the Commission, similarly to what has been done for climate issues, take the initiative for the creation of an international body tasked with the monitoring and evaluation of land use change at global level, as well as of policies which can affect this evolution. It is indeed important to take into account all the drivers of land use change: mostly food production, renewable energy and renewable chemistry, but also urbanisation, transport infrastructure, the use of fossil resources (oil shale), etc.

The Biodiesel sector has successfully adjusted itself to meet biofuels production objectives quickly and effectively, to respect sustainability criteria and to contribute best to the reduction of greenhouse gas emissions. As you may know, the same operators in this sector have also invested heavily in 2<sup>nd</sup> generation (not available before 2020) and 3<sup>rd</sup> generation (probably available in 2030) biofuels.

Changes to existing rules based on very uncertain assessments could lead to the squeezing of European biodiesel out of the market and to a significant increase in our imports from countries less mindful of environmental standards. We do not believe this is the right answer to the ILUC issue.

Yours sincerely,

  
President of EOA

  
Spokesman for EOA

**Background note – EOA:**

*Founded in April 2002, the EOA - European Oilseed Alliance - is meant to bring together the organisations representing the various partners of the EU oilseed and protein-crops sector: producers, collectors, processors, and other partners closely linked to the sector. The purpose of EOA is to defend EU oilseed sector.*

*EOA membership represents 90 % of EU oilseed production and is made of oilseed sectors organisations from Germany, France, the United Kingdom, Belgium, Poland, and the Czech Republic. European organisations of the oilseed sector – Copa-Cogeca, EBB, Fediol - are closely associated to EOA activities and actions.*

Cc: Jürgen Müller, Member of Cabinet

The letter has also been sent to:

Commissioner Günther Oettinger  
Commissioner Michel Barnier  
Commissioner Dacian Cioloş  
Commissioner Karel de Gucht  
Commissioner Joaquin Almunia  
Commissioner Antonio Tajani  
Commissioner Janez Potočnik  
Commissioner Máire Geoghegan-Quinn

enreg svp

**From:** [REDACTED]  
**Sent:** Monday, March 26, 2012 12:44 PM  
**To:** KARNITSCHNIG Michael (CAB-BARROSO)  
**Cc:** [REDACTED] (CAB-OETTINGER); [REDACTED] i@ec.europa.eu;  
[REDACTED] (CAB-DE GUCHT); [REDACTED] (CAB-KALLAS); [REDACTED] (CAB-BARNIER);  
[REDACTED] (CAB-POTOCNIK); [REDACTED] (CAB-HEDEGAARD); [REDACTED] (CAB-  
GEOGHEGAN-QUINN); [REDACTED] (CAB-PIEBALGS); [REDACTED] (CAB-CIOLOS)  
**Subject:** To the attention of Mr. Karnitschnig

Dear Mr Karnitschnig,

Please find enclosed a letter regarding European Parliament Resolution of 15<sup>th</sup> March 2012 on a Roadmap for moving to a competitive low carbon economy in 2050 (2011/2095(INI)) – paragraph 44 on biofuels and iLUC.

Best regards,

On behalf of [REDACTED]

[REDACTED]  
[REDACTED]  
Copa - Cogeca

Rue de Trèves 61

1040 Brussels  
[REDACTED]



Visit our web site :

[www.copa-cogeca.eu](http://www.copa-cogeca.eu)

**Copa - European farmers**

**Cogeca - European agri-cooperatives**

BI(12)2335:1

Mr Michael KARNITSCHNIG  
Member of the Cabinet of  
Mr Barroso  
European Commission  
200 rue de la Loi  
B-1040 Brussels

Brussels, 26<sup>th</sup> March 2012

**Re: European Parliament Resolution of 15<sup>th</sup> March 2012 on a Roadmap for moving to a competitive low carbon economy in 2050 (2011/2095(INI)) – paragraph 44 on biofuels and iLUC**

Dear Mr Karnitschnig,

The European Parliament has made an important contribution to the debate on indirect land use change (iLUC) by rejecting paragraph 45 of the draft report by Chris Davies on a Roadmap for moving to a competitive low carbon economy in 2050 (2011/2095(INI)) (A7-9999/2012), in which the European Commission was called upon to introduce iLUC factors "in order to take account of the greenhouse gas emissions attributable to changes in land use patterns caused by biofuels production".

Copa-Cogeca welcomes the Resolution of 15<sup>th</sup> March 2012 on a Roadmap for moving to a competitive low carbon economy in 2050, particularly paragraph 44, in which the European Parliament "calls, therefore, on the Commission to follow a broader approach on the issue of iLUC and to promote adequate protection of the environment in third countries affected by land use change bilaterally and multilaterally in order to take account of the greenhouse gas emissions attributable to changes in land use patterns; this could be achieved through the introduction of additional sustainability requirements on certain categories of biofuels imported from third countries".

Copa-Cogeca would like to inform you of its opinion on the introduction of iLUC factors in the calculation of greenhouse gas emissions from biofuels.

Although food production remains the primary objective of EU agriculture, Copa-Cogeca would point out that:

1. in EU agriculture, not all arable land previously in production in the EU is being farmed;
2. only part of the oilseed, cereals and sugar beet used to produce biofuels is actually converted into energy. The majority stays in the feed sector and is used as animal feed. Between 2003 and 2008, rapeseed production increased from 12 million tonnes to 19 million tonnes, generating an additional 4 million tonnes of rapeseed meal. Already, this 4 million tonnes of rapeseed meal substitutes the equivalent of 2 million hectares-worth of soya from Brazil. In the EU 27, the production potential for oilseed is estimated at 39 million tonnes, i.e. an additional 7.3 million tonnes of meal. In total, this 11.3 million tonnes of meal would substitute the equivalent of 5.6 million hectares-worth of soya from Brazil. While soya production does not directly cause deforestation, there has been a shift in Brazilian beef production to forested areas to make way for increased soya production. Consequently, biofuel production in the EU would not only help to reduce

the surface area needed to grow crops for use mainly in animal feed production, but thereby also help offset land use change in third countries;

3. replacing oilseed, cereals and sugar beet by crops destined solely for non-food purposes would present a real threat to food security. However, first-generation biofuels from oilseed, cereals and sugar beet would drive the development of these crops, generating an additional supply of crop residue available for the production of second generation biofuels;
4. land-use change is not only related to biofuels and bioliquids. There are much more obvious causes of land-use change than biofuels and bioliquids, notably spatial planning, environment, trade and agricultural policy.
5. the measures implemented by the governments of third countries to protect the environment are having an effect. The significant decrease in deforestation of the Brazilian rainforest highlights the efficiency of measures which have been taken by the Brazilian government (see annex).

Copa-Cogeca is opposed to a legislative proposal addressing the phenomenon of indirect land-use change related to biofuels and bioliquids, based on imprecise and contradictory models, which places the production of biofuels of Community origin at a disadvantage. Indeed, the phenomenon of indirect land-use change is greatly influenced by many political measures that are not mutually connected.

Copa-Cogeca believes that the sustainability criteria established by articles 17.2 to 17.6 of Directive 2009/28/EC, once fully enforced by Member States, will be effective in guaranteeing that biofuels of Community origin are sustainable. The EU should encourage effective environmental legislation to be established in third countries, in order to prevent the phenomenon of land-use change from occurring.

Copa-Cogeca encourages the EU to promote adequate environmental protection in regions affected by land use change bilaterally and multilaterally. For biofuels and bioliquids, this could be achieved through policy option no. 3, "introduce additional sustainability requirements on certain categories of biofuels", as proposed in the EC's report of 22<sup>nd</sup> December 2010.

This approach would be more effective than iLUC factors, the latter being to the detriment of European production without providing any guarantees with respect to land-use change in third countries.

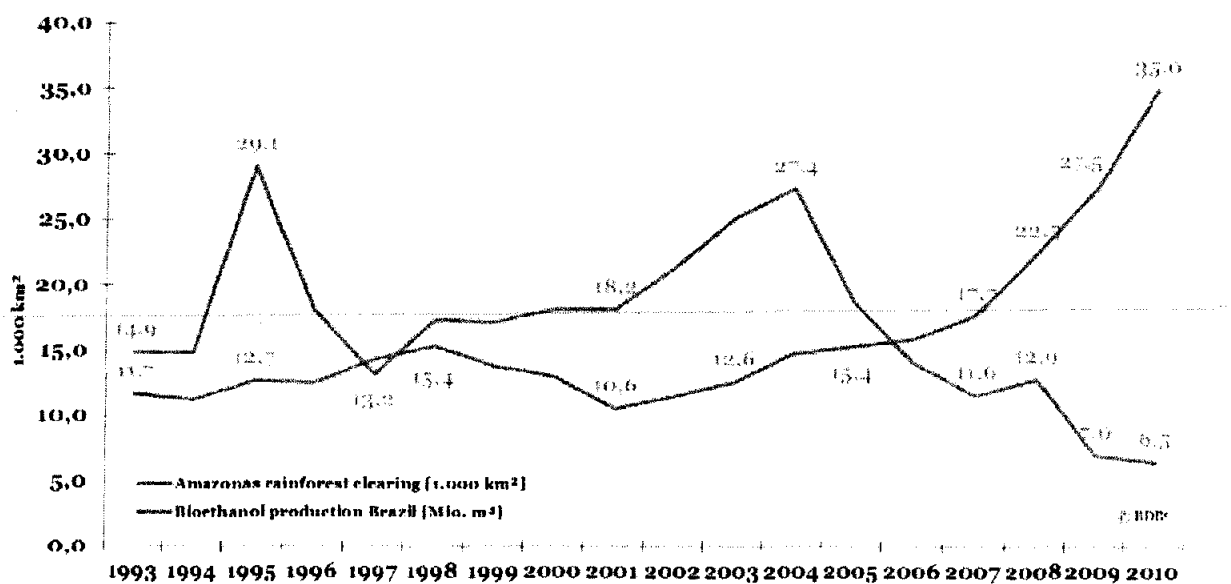
We hope these comments will be granted your full consideration.

Yours sincerely,

# ANNEX

## Bioethanol production und forest clearing

(Sources: mongabay.com, anp.gov.br, ethanolrfa.org, bdbe.de)



Mr Günther Oettinger  
Commissioner for Energy

Brussels, 20<sup>th</sup> March 2012

**Subject: Biofuels and Indirect Land Use Change (ILUC)**

Dear Commissioner,

For several months, the Commission's services have carried out a study on the impact of biofuels on Indirect Land Use Change (ILUC), as was envisaged in the Renewable Energy Directive (RED). It is clear today that in spite of efforts undertaken, there is no reliable scientific or technical data able to give a clear-cut answer to the ILUC issue. It is, without doubt, the reason why an orientation debate could be organised for the College of Commissioners. The future of the RED is indeed at stake.

Experts approached by professionals of the European Oilseed Sector gathered in the trade association EOA (European Oilseed Alliance), believe that the characterisation of the models, but also the parameters used, lead to non-exploitable results.

They especially emphasise the following elements in the studies which lay the foundation for the Commission's approach:

- An undervaluation of land availability: 500 Million hectares of land dedicated to temporary forage and fallow were not taken into account;
- A very poor modelling of oilseed crushing, but also an assessment of the vegetable protein use in animal feeds not adapted to the European situation (i.e. under-estimation of the replacement of rapeseed and sunflower cakes by soya-bean cakes);
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As a result, the ILUC impact of biodiesel would be significantly overvalued, up to nearly 80%.

If the Commission were to introduce an ILUC factor on the basis of existing studies, we fear that serious scientific uncertainties would tarnish the decision, making it unacceptable.

Such a decision would shatter the decade-long achievements of the biodiesel industry:

- The biodiesel industry is today the main source of biofuels in Europe. The end of biodiesel production in Europe would jeopardize the objective of 10% renewable energy in transport by 2020. Today for example, biodiesel accounts for 5 to 7% of the needs in diesel.
- Europe's imports of protein-rich oilseed-cakes would significantly increase. Biofuels have triggered the development of oilseed production leading to the joint production of significant quantities of vegetable proteins for animal feed. These protein rich materials have replaced South American soya-cakes thereby reducing Europe's import dependency. In 10 years, Europe's self-sufficiency has improved from 25% to nearly 40%. In France, over the same period this rate has gone from 25% to 55%.
- While ambitious European objectives remain absolutely desirable, a decline in European production would lead to an increase in biofuel imports from third countries. This would increase direct land use change in those countries, especially as the sustainability of their exports to the EU market should be better controlled.
- The end of the biodiesel sector in Europe would have a devastating impact on jobs and economic activity in rural areas.
- Lastly, biofuel production would consolidate outside Europe, especially on the American continent, which would run counter to the G20 objectives to balance world agriculture production and would have a very negative impact on biodiversity.

**This is the reason why we ask that scientific and technical arrangements be taken so that the topic of ILUC be studied at an international level with the appropriate means.**

During this necessary period of more in-depth scientific analysis, the Commission, out of precaution, could consider an anticipated increase in thresholds for greenhouse gas emissions reductions in the context of the existing calendar (i.e. 35% today until 2017, 50% in 2017 and 60% for units built after 2017). This decision could lead to raising thresholds from 35% to 45% for example.

Lastly, bearing in mind that the ILUC effect, international by nature, must be assessed jointly by the whole scientific community, we suggest the Commission, similarly to what has been done for climate issues, take the initiative for the creation of an international body tasked with the monitoring and evaluation of land use change at global level, as well as of policies which can affect this evolution. It is indeed important to take into account all the drivers of land use change: mostly food production, renewable energy and renewable chemistry, but also urbanisation, transport infrastructure, the use of fossil resources (oil shale), etc.

The Biodiesel sector has successfully adjusted itself to meet biofuels production objectives quickly and effectively, to respect sustainability criteria and to contribute best to the reduction of greenhouse gas emissions. As you may know, the same operators in this sector have also invested heavily in 2<sup>nd</sup> generation (not available before 2020) and 3<sup>rd</sup> generation (probably available in 2030) biofuels.

Changes to existing rules based on very uncertain assessments could lead to the squeezing of European biodiesel out of the market and to a significant increase in our imports from countries less mindful of environmental standards. We do not believe this is the right answer to the ILUC issue.



Yours sincerely,

**President of EOA**

**Spokesman for EOA**

***Background note – EOA:***

*Founded in April 2002, the EOA - European Oilseed Alliance - is meant to bring together the organisations representing the various partners of the EU oilseed and protein-crops sector: producers, collectors, processors, and other partners closely linked to the sector. The purpose of EOA is to defend EU oilseed sector.*

*EOA membership represents 90 % of EU oilseed production and is made of oilseed sectors organisations from Germany, France, the United Kingdom, Belgium, Poland, and the Czech Republic. European organisations of the oilseed sector – Copa-Cogeca, EBB, Fediol - are closely associated to EOA activities and actions.*

Cc: Jasmin Battista, Member of Cabinet

The letter has also been sent to:  
Commissioner Connie Hedegaard  
Commissioner Michel Barnier

→ Commissioner Dacian Cioloş  
Commissioner Karel de Gucht  
Commissioner Joaquín Almunia  
Commissioner Antonio Tajani  
Commissioner Janez Potočnik  
Commissioner Máire Geoghegan-Quinn

Sent: Friday, April 27, 2012 4:27 PM

To: [REDACTED] (CAB-ASHTON); [REDACTED] e (CAB-REDING); [REDACTED] in (CAB-ALMUNIA);  
[REDACTED] (CAB-KALLAS); [REDACTED] (CAB-KROES); [REDACTED] (CAB-TAJANI); [REDACTED] (CAB-  
SEFCOVIC); [REDACTED] (CAB-REHN); [REDACTED] (CAB-POTOCNIK); [REDACTED] (CAB-PIEBALGS);  
[REDACTED] (CAB-BARNIER); [REDACTED] (CAB-VASSILIOU); [REDACTED] (CAB-SEMETA); [REDACTED]  
(CAB-DE GUCHT); [REDACTED] (CAB-DALLI); [REDACTED] e (CAB-GEOGHEGAN-QUINN); [REDACTED]  
[REDACTED] (CAB-LEWANDOWSKI); [REDACTED] (CAB-DAMANAKI); [REDACTED] (CAB-GEORGIEVA);  
[REDACTED] (CAB-OETTINGER); [REDACTED] (CAB-HAHN); [REDACTED] (CAB-HEDEGAARD);  
[REDACTED] (CAB-FULE); [REDACTED] (CAB-ANDOR); [REDACTED] (CAB-MALMSTROM); CIOLOS Dacian  
(CAB-CIOLOS)

Cc:

Subject: For the attention of the Members of the European Commission

Dear Commissioner, --

Please find enclosed for your information a letter which was sent to President Barroso today.

Yours faithfully,

On behalf of

Secretary General of Copa-Cogeca

Team Assistant

Copa - Cogeca

Rue de Trèves 61

1040 Brussels

Tel: + 32 (0)2 287 27 80

Fax: + 32 (0)2 287 27 00

Visit our web site :

[www.copa-cogeca.eu](http://www.copa-cogeca.eu) <blocked::http://www.copa-cogeca.eu/>

Copa - European farmers

Cogeca - European agri-cooperatives



CC(12)3245:1

Mr José Manuel Durão BARROSO  
President of the European  
Commission  
European Commission  
200 Rue de la Loi  
B-1049 Brussels

Brussels, 27th April 2012

## **Re: Indirect land use change (iLUC)**

Dear President,

The issue of the impact of indirect land use change on greenhouse gas emissions in relation to biofuel demand in 2020 will be examined by the College of Commissioners on 2nd May. Copa-Cogeca would therefore like to remind you of its position on this issue.

The introduction of iLUC factors, as discussed amongst the Commission's services as a result of iLUC, would convey a highly depressing signal to the European agricultural sector in several respects.

1. iLUC factors would attribute environmental problems caused in third countries to EU farmers producing in an environmentally-friendly way.
2. iLUC factors would be an imaginary solution. It is not European farmers who can resolve environmental problems in third countries, but the governments in these respective countries that are responsible for doing so.
3. iLUC factors would undermine European farmers' trust that responsible political decisions are being taken. Their introduction would be legally unjustifiable. Not only would this contradict the "polluter pays" principle but also the principle of equal treatment. As a result, environmentally-friendly land use in the EU would be treated in the same way as land use in third countries having a negative effect on the environment.
4. iLUC factors would not only call European biofuels into question, but also, as a consequence, all use of agricultural biomass for energy and non-food purposes in the EU. Ultimately, a lack protein-rich by-products in the food chain may lead to further outsourcing of European agriculture.
5. iLUC factors would put the European biofuels industry at risk, which has a turnover of €12.2 billion and generates 48,000 jobs directly and indirectly.

According to our information, despite the fact that iLUC factors will be assigned to farmers, the positions of certain Member States as well as the European Parliament and NGOs have been taken into account, but not the position of Copa-Cogeca which represents 13 million farmers and their families, and 38,000 cooperatives. For Copa-Cogeca, this situation is unacceptable.

Copa-Cogeca would emphasise its opposition to a legislative proposal addressing the impact of indirect land use change related to biofuel demand in 2020 which is based on imprecise and contradictory models and which places the production of biofuels of Community origin at a disadvantage. For this reason, Copa-Cogeca would call on you to take a decision which directly resolves the problem of land use change.

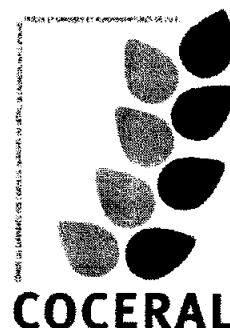
We hope that these comments will be granted your full consideration.

Yours sincerely,

 Copa

 Cogeca

Copy to:  
Catherine Day



Ms. Catherine Day  
Secretary General  
European Commission  
B-1049, Belgium

Brussels, 4 May 2012  
Ref. 12 ENV 93

### Indirect Land Use Change (iLUC) and Impacts of a Commission Proposal

Dear Ms. Day,

We have written to you previously about the impacts of a potential iLUC proposal on the EU vegetable oil and proteinmeal industry and the upstream grain trade sector. As the Commissioners discuss possible ways to tackle the issue and the public debate intensifies, we would like to reiterate some critical aspects of the iLUC phenomenon.

- **The science on iLUC is inconclusive:** Land use accounting is a relatively new area of science, where models and databases have significant gaps. The inconclusiveness of science is so significant that it is insufficient to underpin effective policy design and implementation. This is also recognized by DG Climate Action in the Commission Decision on Land-Use, Land-Use Change and Forestry (LULUCF).
- **IFPRI study overestimated the iLUC impact of biodiesel by 78%:** The false assumptions regarding the oil and meal content of oilseeds has led to an overestimation of LUC of 1.4 million hectares. This corresponds to 78% of the IFPRI's estimation for agricultural cropland expansion. Having a deviation as much as 78% and taking into account that this report has not been scientifically peer reviewed, IFPRI's iLUC Report cannot be used as a reference in the policy making.
- **Option 1:** According to the public reports, this option would entail an increase of the GHG savings threshold to 60% with grandfathering provisions. Should this option be preferred by the European Commission, soybean crushing for food, feed, biodiesel and oleo chemical applications would become economically unviable in the EU. This would increase the EU protein deficiency, increase imports from 3<sup>rd</sup> countries, hamper the EU aspirations for a bio-based economy and force FEDIOL members to end one-third of their operations permanently. This would have an economic impact equivalent to approximately 9 billion Euros turnover loss annually and cause more than 7,000 persons to lose their jobs.
- **Options 2 and 3:** These options under consideration would threaten the entirety of oilseeds industry, as attributed iLUC-factors would restrict the use of all vegetable oils for the production of biodiesel. The estimated economic impact of such a decision would amount to approximately 13 billion Euros annually and lead to considerable employment losses, where FEDIOL members directly employ more than 20,000 persons.
- **Multi-feedstock sourcing is absolutely crucial for food, feed and biofuels markets:** Options that penalize pathways would put the commodities' availability into question, increase price volatility and jeopardize the EU targets for renewable energy and bio-based economy. According to the NREAPs, biodiesel is critical in reaching the 10% target by 2020 and beyond.

# FEDIOL

We regret to see that the European Commission has not devoted equal effort in assessing other options, including measures which would encourage iLUC mitigating practices.

Once again, we ask the members of the European Commission to carefully consider the implications of an iLUC proposal, not only for the biofuels producers but for the entirety of the chain. As all scientists do agree, every human activity could cause iLUC to take place. However, putting the entire burden on a single product would only have significant draw backs for the European food, feed and oleo chemical industries.

Thanking you in advance for your consideration, I remain,

Yours Sincerely,

2

 FEDIOL

 COCERAL

Cc: Cabinet of President Barroso  
Cabinet of Energy  
Cabinet of Climate Action  
→ Cabinet of Agriculture & Rural Development  
Cabinet of Industry & Entrepreneurship  
Cabinet of Trade  
Cabinet of Transport  
Cabinet of Environment

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## About FEDIOL – The EU Vegetable Oil and Proteinmeal Industry

**FEDIOL** represents the interests of the European vegetable oils and proteinmeal industry. With over 150 facilities in Europe, the sector provides over 20.000 direct employments. Our members process approximately 56 million tonnes of basic products a year for the food, feed, energy and oleo chemical markets. FEDIOL members make the EU industry the second largest player in the world market for vegetable oils, after China.

Oilseeds crushing yield vegetable oils and proteinmeals as co-products. While vegetable oils are used for food and technical uses (pharmaceuticals, paints, detergents, biodiesel, etc.), proteinmeals are used to meet the increasing global demand for meat and protein.

## About COCERAL - Comité du Commerce des céréales, aliments du bétail, oléagineux, huile d'olive, huiles et graisses et agrofournitures

**COCERAL** is the voice of the European cereals, rice, feedstuffs, oilseeds, olive oil, oils and fats and agro supply trade. Its members are the national trade organisations of most of the EU-27 Member States, who represent collectors, distributors, exporters, importers and agri-bulk storers of the above mentioned commodities.

(CAB-CIOLOS)

**From:** (CAB-CIOLOS)  
**Sent:** 02 July 2012 11:19  
**To:** CAB CIOLOS ARCHIVES  
**Subject:** FW: 1 - Proposal on ILUC from the oilseed and biodiesel sector  
**Attachments:** 120628 Letter to JM Barroso EOA, NFU, UFOP, FOP.pdf

**From:** Secretariat DG  
**Sent:** Monday, July 02, 2012 11:03 AM  
**To:** CIOLOS Dacian (CAB-CIOLOS)  
**Cc:** (CAB-CIOLOS); (CAB-CIOLOS); S CAB-CIOLOS); (CAB-CIOLOS)  
**Subject:** De la part de 1 - Proposal on ILUC from the oilseed and biodiesel sector

Dear Commissioner,

The European Oilseed Alliance (EOA), the National Farmer Union (NFU), FOP and UFOP (Union zur Förderung von Oel- und Proteinpflanzen e.V.) would like to share with you the letter they sent today to Commission President José Manuel Barroso. These associations represent the European oilseed sector, from growers, crushers, to vegetal oil, biodiesel, and co-products (animal feedstock) producers.

This letter highlights the challenges raised by the debate on Indirect Land Use Change (ILUC) for the oilseed sector, but also suggests some possible solutions. As one of the Commissioners most interested in the topic, we thought this letter would be of interest to you.

Yours faithfully,

EOA



José Manuel Barroso  
President of the European Commission  
European Commission  
1049 Brussels, Belgium

Brussels, 28<sup>th</sup> June 2012

**Subject: Proposal on Indirect Land Use Change (ILUC)**

Dear Mr. President,

Following months of debate and political pressure, the European Commission will soon have the difficult task to decide how best to address Indirect Land Use Change (ILUC). We, signatories of the letter, have invested heavily in the green economy. We are concerned about the impact of such a decision. Not only is the future of Europe's biodiesel industry at stake, but also our efforts to generate greener growth.

Science used in evaluating ILUC is rapidly evolving, but still remains highly uncertain. The IFPRI study, which seems to have become the only reference for some of the Commission's services, is far from being an adequate basis for political decision. It contains numerous flaws, relies on highly questionable assumptions and suffers from a lack of sound research in many of the key features of its ILUC modeling (for specific examples of flaws see below). As a result, the ILUC impact of biodiesel for example would be significantly overvalued. Therefore this study is not a suitable scientific basis for a legal proposal to introduce ILUC factors. Applying them out of precaution is not relevant given the uncertainty of the ILUC science.

And yet, the Commission appears ready to back the introduction of crop-specific ILUC factors that would jeopardize the future of today's main alternative to fossil fuel in Europe while endangering Europe's energy independence. The consequences would be significant, not only for Europe's commitment towards reaching a 10% target of renewable energy in transport by 2020 but also for Europe's key objective to re-launch growth and jobs in. At a time when petroleum is becoming scarcer and the need to develop sustainable alternative is even more pressing, can we really afford to threaten growth, employment, and investment in the green economy?

- **Threat to 50,000 jobs** in the biodiesel sector which represents a total turnover of €9.6 billion in 2011.
- **Halt to research and development in the green economy.** The biodiesel sector generates a flow of research and development in new technology for the future: second generation biodiesel and bio kerosene, green chemistry. These developments would lead to the deployment of nearly 400 000 jobs in Europe which would not be created if the biodiesel related "green economy" is stopped in full swing. The biodiesel sector has heavily invested in oilseed processing and innovative green chemistry and has already made important industrial investment in these sectors.
- **Towards a drastic surge in protein animal feed imports:** Biodiesel has triggered the development of oilseed production leading to the joint production of significant quantities of vegetable proteins for animal feed. These protein rich materials have replaced South

American soya-cakes thereby reducing Europe's import dependency. In 10 years, Europe's self-sufficiency has improved from 25% to nearly 35%.

The industry however understands the need to act and has been constantly working on finding ways to produce biofuels in the most sustainable way. The efforts of the whole supply chain, including third countries, to implement certification systems, have to be acknowledged. The Energy Directive stands as a unique example of an EU piece of legislation influencing all stages of crop production, conversion and trading, including in third countries. **Today, we stand ready to make greater efforts towards demonstrating our sustainability and we welcome the fact that this objective also lies at the heart of the Commission's latest Communication on Renewable Energy (dated 6 June). Today, we propose to deepen our commitments to reduce GHG emissions in transport.** Undeniably, more in-depth scientific analysis of ILUC remains necessary at an international level, making it absolutely impossible to introduce ILUC factors today and in the mid-term. Against this background, the only viable approach at EU level is to **raise existing emissions reduction thresholds** both in the Renewable Energy and Fuel Quality Directives, up to a certain level, while **protecting existing investments**. Such an approach could consist in raising the current thresholds included in these directives, while keeping a two-tier approach: a first increase immediately, for units in operation from 2013 onwards; and later on, a new more ambitious objective for new units. For units in activity before end of 2013, a grand-fathering clause would protect current investments, provided that their biofuels reach an adequate level of emissions reduction.

The value of the fossil comparator should also be reviewed, taking into account actual emissions from new fossil fuels, including those from oil sands.

In practice, reaching such targets will require great efforts and investments. Going the last mile is always much harder than running the first miles. Yet with a clear vision for the future and a predictable legal environment, the industry may adapt and develop the necessary instruments for the next generation of alternative fuel. We remain confident that Europe's energy independence and decarbonisation of transport can be achieved in an effective and sustainable way. This is and has always been our principal concern.

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EOA

Combinable Crops Board, National Farmers Union (NFU)

UFOP (Union zur Förderung von Oel- und Proteinpflanzen e.V.)

Chairman of FOP

**Note:**

The **European Oilseed Alliance (EOA)** brings together organisations representing partners from the EU oilseed and protein-crops sector: producers, collectors, processors, and other partners closely linked to them. EOA membership represents 90 % of EU oilseed production and is made of oilseed sectors organisations from Germany, France, the UK, Belgium, Poland, and the Czech Republic.

The **National Farmers Union (NFU)** is the largest farming organization in the UK, providing professional representation and services to its farmer and grower members.

The **UFOP** (Union zur Förderung von Oel- und Proteinpflanzen e.V.) gathers all companies, associations and institutions participating in the production, processing and marketing of indigenous oil and protein-bearing plants in Germany under the UFOP banner.

The **FOP** stands for the « Fédération Française des Producteurs d'Oléagineux et de Protéagineux ». It represents 150 000 French producers of oilseeds and protein seeds.

**IFPRI study – main flaws**

- **Highly questionable vegetable oils substitution rates:** the study includes an Indonesian peatland effect while palm oil is involved only marginally in the production of biodiesel. The study assumes important substitution effects between vegetable oils, which is not backed by data and disregards the reality of the European biodiesel market (technical limitation on palm oil use for instance);
- **An undervaluation of land availability:** 500 million hectares of land dedicated to temporary forage and fallow are not taken into account;
- **An overestimation of the amount of forage converted land:** it assumes changes in equal proportions for pasture and managed forest. In reality data suggests that pasture is 20 to 30 times more likely to be converted than forest;
- **A very poor modeling of oilseed crushing,** but also an assessment of the vegetable protein use in animal feeds not adapted to the European situation (i.e. under-estimation of the replacement of rapeseed and sunflower cakes by soya-bean cakes);
- **Very conservative yield hypotheses:** anticipated high prices will most likely lead to higher yield increases than in previous decades;
- Shaky assumptions on the amount of CO2 released per type of land converted into arable land.
- **Overestimation of impact of Palm Oil:** Palm plantations being modeled as annual crops (with much lower carbon sequestration than perennial crops like Palm plantations ...). One third of future development of palm plantations estimated to be located on peatland (while latest studies made for USDA take a much lower rate of 11%).





landwirtschaftskammer  
österreich

Präsidentenkonferenz der  
Landwirtschaftskammern Österreichs

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1014 Wien

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- 2. 05. 2012

Herrn Agrarkommissar  
Dr. Dacian Ciolos  
Europäische Kommission  
200, rue de la Loi  
B-1049 Brüssel

per Mail: [redacted]@ec.europa.et

**Legislativvorschlag zu Biokraftstoffen und ILUC**

Wien, 27. April 2012

Sehr geehrter Herr Kommissar!

Der Vorentwurf eines Legislativvorschlags zu indirekten Landnutzungsänderungen im Zusammenhang mit Biokraftstoffen und flüssigen Biobrennstoffen (ILUC), der vom EU-Kommissar für Energie, Herrn Oettinger, und von der EU-Kommissarin für Klimaschutz, Frau Hedegaard, vorgeschlagen wurde, wird demnächst vom Kollegium der Kommissare geprüft. Gestatten Sie uns vor diesem Hintergrund eine Reihe von Bemerkungen an Sie heranzutragen.

Jeder auf die Etablierung von ILUC-Faktoren abzielende Vorschlag, der die Verwendung von europäischer landwirtschaftlicher Biomasse als erneuerbare Energiequelle in dem Verkehr dienenden Kraftstoffen in Frage stellt oder gegenüber jener aus Drittstaaten benachteiligt, wird von Seiten der Landwirtschaftskammer Österreich strikt abgelehnt.

Obwohl die Erzeugung von Lebensmitteln weiter Hauptziel der europäischen Landwirtschaft ist, geben wir Folgendes zu bedenken:

1. Nicht die Gesamtheit des früher in der EU bebauten Ackerlands wird bewirtschaftet.
2. Die zur Herstellung von Biokraftstoffen verwendeten Ölsaaten-, Getreide- und Zuckerrübenkulturen werden nur zum Teil tatsächlich zu Energie verwertet. Der Großteil bleibt als Futtermittel dem Ernährungsbereich erhalten. Zwischen 2003 und 2008 erhöhte sich die Rapserzeugung von 12 Millionen Tonnen auf 19 Millionen Tonnen, was ein zusätzliches Angebot von 4 Millionen Tonnen Rapsschrot hervorbrachte. Durch diese 4 Millionen Tonnen Rapsschrot werden im Gegenwert bereits 2 Millionen Hektar Soja aus Brasilien ersetzt. In der EU-27 wird das Produktionspotenzial bei Ölsaaten auf 39 Millionen Tonnen geschätzt, was ein Zusatzangebot an Schrot in Höhe von 7,3 Millionen Tonnen brächte. Insgesamt würden diese 11,3 Millionen Tonnen Schrot das Äquivalent von 5,6 Millionen Hektar Soja aus Brasilien substituieren. Während der Sojaanbau nicht die

unmittelbare Ursache für Entwaldung ist, hat doch eine Verlagerung der brasilianischen Rindfleischproduktion in bewaldete Gebiete stattgefunden, um Freiraum für einen erhöhten Anbau von Soja zu schaffen. Folglich trägt die Biokraftstoffgewinnung in der EU nicht nur dazu bei, die zum Anbau von überwiegend der Futtermittelerzeugung dienenden Kulturpflanzen benötigte Anbaufläche zurückzuführen, sondern auf diesem Wege auch Landnutzungsänderungen in Drittländern zu kompensieren.

Darüberhinaus werden durch die industrielle Getreideverarbeitung zu Stärke und Bioethanol in Österreich Eiweißfuttermittel im Ausmaß von aktuell rund 400.000 Tonnen erzeugt, die wiederum ein entsprechendes Maß an Sojaanbaufläche in Südamerika ersetzen.

3. Bei Ersatz von Ölsaaten, Getreide und Zuckerrüben durch ausschließlich Non-Food-Kulturen wäre die Ernährungssicherheit tatsächlich gefährdet. Biokraftstoffe der ersten Generation aus Ölsaaten, Getreide und Zuckerrüben würden dagegen der weiteren Entwicklung dieser Kulturen einen Impuls geben und mithin zu einem zusätzlichen Angebot von für die Herstellung von Biokraftstoffen der zweiten Generation verfügbaren Ernterückständen führen.

4. Landnutzungsänderungen hängen nicht ausschließlich mit Biokraftstoffen und flüssigen Biobrennstoffen zusammen. Es gibt wesentlich offensichtlichere Gründe für Landnutzungsänderungen - insbesondere solche, die mit der Raumordnungs-, Umwelt-, Handels- und Agrarpolitik sowie Landbesitzrechten zu tun haben.

5. Die von Drittlandsregierungen zum Schutz der Umwelt durchgeführten Maßnahmen wirken sich aus. Die starke Reduktion der Regenwaldrodung der vergangenen Jahre in Brasilien offenbart die Effizienz der von der brasilianischen Regierung unternommenen Maßnahmen. Allerdings wird dieses Gesetz jetzt geändert. Die Einführung von ILUC-Faktoren wird den brasilianischen Urwald nicht schützen, sondern genau das Gegenteil bewirken. Bilaterale Verhandlungen hingegen sind jetzt die einzige Möglichkeit, um kurzfristig zukünftige großflächige Rodungen zu verhindern.

Einem Legislativvorschlag zu dem Phänomen indirekter Landnutzungsänderungen im Zusammenhang mit Biokraftstoffen und flüssigen Biobrennstoffen, der die Produktion von Biokraftstoffen aus der Gemeinschaft auf Basis von inexakten, fehlerhaften und widersprüchlichen Modellen benachteiligen würde, können und werden wir uns auf das Schärfste widersetzen. Indirekte Landnutzungsänderungen werden massiv durch vielfältige Politikmaßnahmen beeinflusst, die nicht in Verbindung zueinander stehen und nicht durch einen ILUC-Faktor für die europäische Produktion sondern durch Ansätze und Maßnahmen auf lokaler Ebene in den betroffenen Drittstaaten beeinflusst werden können.

Aus unserer Sicht sind die Nachhaltigkeitskriterien gemäß Artikel 17.2 bis 17.6 der Richtlinie 2009/28/EG eine Garantie dafür, dass Biokraftstoffe aus der Gemeinschaft nachhaltig sind, soweit diese Kriterien in allen Mitgliedstaaten voll umgesetzt werden. Die EU sollte daher die Etablierung wirksamer Umweltgesetzesregelungen sowie die Umsetzung und Kontrolle der Nachhaltigkeitskriterien in Drittländern vorantreiben, um dem Phänomen von Landnutzungsänderungen entgegenwirken zu können.

Wir rufen daher die EU dazu auf, für adäquaten Umweltschutz in den von Landnutzungsänderungen betroffenen Regionen auf bilateraler und multilateraler Ebene ein zu treten. Für Biokraftstoffe und flüssige Biobrennstoffe könnte dies in Übereinstimmung mit der Politikoption Nr. 3, den „zusätzlichen Nachhaltigkeitsanforderungen für bestimmte Kategorien von Biokraftstoffen“ (wie im Bericht der Europäischen Kommission vom 22. Dezember 2010 vorgeschlagen) geschehen.

Ein solcher Ansatz wäre zudem deutlich effizienter als derjenige der ILUC-Faktoren, die der europäischen Produktion abträglich sind, ohne dass deren Einwirken auf Landnutzungsänderungen in Drittländern garantiert wäre.

Die Landwirtschaftskammer Österreich ersucht um Berücksichtigung der vorgebrachten Punkte und steht für weitergehende Gespräche gerne zur Verfügung.

Mit freundlichen Grüßen

Landwirtschaftskammer Österreich

Landwirtschaftskammer Österreich

[REDACTED]  
[REDACTED] (CAB-CIOLOS)

**From:** HAEUSLER Georg (CAB-CIOLOS)  
**Sent:** dimanche 29 avril 2012 18:54  
**To:** CAB CIOLOS ARCHIVES  
**Subject:** FW: Legislativvorschlag zu Biokraftstoffen und ILUC  
**Importance:** High  
**Attachments:** Briefentwurf\_ILUC\_EK\_Ciolos\_120424.pdf

Georg Häusler  
Head of Cabinet of Commissioner Dacian Cioloş  
European Commission

B-1049 Brussels, Belgium  
Tel. (+32.2) [REDACTED]

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**From:** PKO-FORST [mailto:[REDACTED]] **On Behalf Of** PKO-ENERGIE  
**Sent:** Friday, April 27, 2012 11:06 AM  
**To:** HAEUSLER Georg (CAB-CIOLOS)  
**Cc:**  
**Subject:** Legislativvorschlag zu Biokraftstoffen und ILUC  
**Importance:** High

Sehr geehrter Herr Kabinettschef!

Die Landwirtschaftskammer Österreich übermittelt anliegend ihre Bemerkungen zum Vorentwurf eines Legislativvorschlages zu indirekten Landnutzungsänderungen im Zusammenhang mit Biokraftstoffen und flüssigen Biobrennstoffen.

Um Berücksichtigung der vorgebrachten Punkte wird höflich ersucht.

Mit freundlichen Grüßen

Landwirtschaftskammer Österreich

Austrian Chamber of Agriculture

Forstwirtschaft/Energie

Schauflergasse 6, 1014 Wien  
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<<Briefentwurf\_ILUC\_EK\_Ciolas\_120424.pdf>>

[REDACTED]

[REDACTED]

(CAB-CIOLOS)

**From:** (CAB-CIOLOS)  
**Sent:** lundi 4 juin 2012 17:27  
**To:** CAB CIOLOS MAIL  
**Cc:** (CAB-CIOLOS)  
**Subject:** FW: Urgent - De la part de EOA - Dossier ILUC  
**Importance:** High

For registration and attribution.

Thanks

Commissioner Ciolos  
Member of the European Commission  
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**From:**  
**Sent:** Monday, June 04, 2012 5:26 PM  
**To:** CIOLOS Dacian (CAB-CIOLOS)  
**Cc:** HAEUSLER Georg (CAB-CIOLOS); (CAB-CIOLOS)  
**Subject:** Urgent - De la part de l'EOA - Dossier ILUC  
**Importance:** High

URGENT

*Message à l'attention de Monsieur le Commissaire Dacian Ciolos*

Monsieur le Commissaire, Cher Dacian,

Comme tu le sais, une réunion importante organisée par le Secrétariat Général a lieu demain, le 5/6.

La Commission devrait décider de la marche à suivre sur la proposition relative au changement indirect d'affectation des sols (CASI) lié à la production des biocarburants.

Aussi, je voulais t'alerter du danger pesant sur l'avenir de la filière biodiesel en Europe:

Aucune donnée scientifique et technique fiable ne permet aujourd'hui d'apporter une réponse claire à la problématique CASI. L'étude IFPRI, base des travaux de la Commission, contient de nombreuses inexactitudes et hypothèses critiquables qui ont conduit à une surestimation considérable de l'effet CASI pour le biodiesel (cf étude

L'introduction d'un facteur CASI aurait pour conséquence la fin

4/06/2012

de la production européenne de biodiesel (à base de colza majoritairement). La filière biodiesel constitue actuellement la principale production de biocarburants en Europe, sa disparition compromettrait la possibilité d'atteindre la cible des 10% d'énergies renouvelables dans les transports d'ici 2020.

• Remplir cet objectif en se privant de l'une des principales alternatives au pétrole (et ce alors même que 65% du parc automobile européen roule au diesel) semble difficile et signifierait une augmentation drastique de nos importations de pays tiers parfois moins soucieux de l'environnement.

• La dépendance de l'Europe en matières riches en protéines s'en trouverait fortement accrue : la production des biocarburants a permis le développement de la production d'oléagineux permettant la co-production de quantités significatives de protéines végétales destinées à l'alimentation animale. Ces matières riches en protéines se substituent notamment aux tourteaux de soja sud-américains. Ainsi en 10 ans l'Europe est-elle passée d'un taux d'autosuffisance de 25% à près de 40%.

• Les conséquences de la disparition du secteur biodiesel sur l'emploi, la croissance et l'innovation en Europe seraient également très lourdes :

- non-déploiement de près de 400 000 emplois en Europe d'ici 2020 et menace sur 30 000 emplois directs actuels;

- coup d'arrêt aux investissements dans le secteur de la transformation des oléagineux et de la chimie verte. A titre d'exemple, en France la filière a réalisé en 2011 des investissements industriels importants dans ces filiales pour un montant total de 121 millions d'euros ;

- gel de la recherche et du développement de la seconde génération de biodiesel, aujourd'hui attendue à une échelle industrielle uniquement à l'horizon 2022-2025

J'espère pouvoir compter sur ton soutien pour ce dossier important pour l'agriculture européenne.

Je suis bien évidemment à ta disposition pour toute information complémentaire.

Très Amicalement

;

Fondée en Avril 2002, l'EOA - Alliance européenne pour les oléoprotéagineux - rassemble les divers représentants du secteur des oléagineux et protéagineux en Europe: producteurs, collecteurs, transformateurs, et autres partenaires étroitement liés au secteur. Le but de l'EOA est de défendre le secteur européen des oléagineux.