

MEETING MINUTES

Meeting: ILUC Workshop biodiesel supply chain
Date: 22 November 2013
Time: 14:30- 17:00

Attendees: Daan Peters (chair, Ecofys) Matthias Spöttle (Ecofys), Hugo Valin, Stefan Frank (IIASA), Maarten van den Berg (E4tech).

Nathalie Lecocq (FEDIOL Director General), Barbaros Corekoglu (FEDIOL), Jan Knol (BUNGE), John Volleman (ADM), Dieter Bockey (UFOP), Dominique Dejonckheere (COPA-COGECA), Philippe Dusser (Sofiprotéol), Raffaello Garofalo, Isabelle Maurizi, Dermot Buttle (EBB), Johannes Daum (VDB)

1. Explain and discuss the ILUC modelling project

General points concerning the project and its results

A consortium of Ecofys, IIASA and E4tech has been assigned by the European Commission to model feedstock-specific ILUC emission values associated with the consumption of conventional and advanced biofuels in the EU. The consortium uses the GLOBIOM model, developed by IIASA. Project results are expected by early 2015.

The current meeting is part of a series of stakeholder meetings during which the consortium aims to obtain relevant input and suggestions from stakeholders. This will result in a draft Inventory of changes to GLOBIOM and draft baseline and policy scenarios, which are to be published by the end of January. These draft versions are to be discussed with the Advisory Committee, the Commission and stakeholders. After the final changes to GLOBIOM and final baseline and policy scenarios have been agreed upon, IIASA will update the GLOBIOM model, will subsequently run the model and perform sensitivity analysis.

- Stakeholder: who sits on the Steering Group (SG) that was mentioned in one of the e-mails?
 - Ecofys: representatives from 6-7 different DG's that help interpret the results and guide the process. We had a kick-off with them and will have meetings with them once we have the draft inventory of suggested improvements to GLOBIOM and draft results from the modelling. Stakeholder: Does the SG consist of representatives from different DG's only or are other people involved too? Ecofys: only representatives from the DGs.
- Stakeholder: will the results be used by the Commission or is establishing ILUC factors still the role of the JRC?
 - Ecofys: not known yet, that's up to the Commission to decide. Given the timing of this project it is not likely that our project results will be used in the current decision making on the ILUC-proposal.

- Stakeholder: what is the aim of the project? Will from now on ILUC factors be recalculated every year?
 - Ecofys: our task in this project is to inform the Commission on emissions from biofuel production. The results will be made public but the Commission hasn't indicated how the results will be used.
- Stakeholder: do you give policy recommendations in this project?
 - Ecofys: that is outside the scope of this project. We want to explain the outcomes, uncertainties, etc. and provide the context of the figures.
- Stakeholder: will there be another SG meeting when you have established the baseline scenario? What is the process with the stakeholders around this?
 - Ecofys: based on input received from stakeholders and our Advisory Committee, the consortium will prepare a draft Inventory of changes to GLOBIOM and draft baseline and policy scenarios. We will discuss these with our Advisory Committee and the Commission. We'll also discuss them with stakeholders. A decision on the final changes and final scenarios will be made based by weighting the estimated effort and estimated effect on the outcomes.
- Stakeholder: do you have a list of stakeholders that you consult?
 - Ecofys: we have meetings with the ethanol and biodiesel supply chains, advanced biofuel producers and NGOs. We make minutes that will be published on the website, listing attendees, questions raised (anonymised) and answers given by consortium. Additional stakeholder consultation takes place through our mailbox ILUC@ecofys.com. We also intend to publish a Q&A document on our website www.globiom-iluc.eu
- Stakeholder: was the type of modelling set by the Commission tendering documentation?
 - Ecofys: this was not specified in the tender documentation and we proposed to use the GLOBIOM model. It is likely that there were other bids which proposed to use other models. IIASA: the US government used for Renewable Fuel Standard impact assessment the US FASOM model, of the same family as GLOBIOM. This type of modelling is therefore a well-known approach to this type of evaluation.
- Stakeholder: what is the precise role of the Advisory Committee (AC)?
 - Ecofys: we have 3 moments of interaction with the AC: (1) a series of individual telephone interviews to obtain suggestions for model improvements and on how we should undertake our modelling work and sensitivity analyses, (2) a face-to-face meeting to discuss the draft Inventory of Changes to GLOBIOM and draft baseline and policy scenarios and (3) a final teleconference to discuss draft modelling results. The role of AC members is to advise us on all content-related aspects of our project, the AC does not take decisions. The AC mission statement and membership is published on our website.
- Stakeholder: modelling the complex food chains is difficult. It would make us feel comfortable a person could be added that is an expert in modelling and also knows about the issues in the supply chains. Is that an option?
 - Ecofys: the consortium is currently contemplating to expand the AC membership, although no decision on this has been taken. Please send us your suggestions for an additional independent academic to be potentially added to the AC.

2. Discussing the GLOBIOM model and the planned modelling

Validation of modelling results

- Stakeholder: let us assume we would like to replicate the model. Would that be possible and if so under what conditions?
 - IIASA: we don't intend to fully disclose the model given IIASA has invested a lot in developing GLOBIOM. However, we have several collaborations with research institutes who can use GLOBIOM in joint projects with IIASA, we want to ensure that the model is used by experts in a consistent way.
- Stakeholder: will this project be peer reviewed?
 - Ecofys/IIASA: Peer review is not currently planned for this project. We have the AC process which ensures the involvement of critical scientists who ask us challenging questions on our approach and assumptions; this comes close to a peer review.
- Stakeholder: the figures that come out of the model are one thing, but the sensitivity of the results is very important. You don't mention other policies such as good governance in Brazil and Indonesia. Biofuel is not solely responsible for cultivation on peat land.
 - IIASA: this will be looked into, in particular in the baseline and scenario design where we will define the policies in place; we have not set those yet but you will be kept informed about them later in the process. Ecofys: please help us with suggestions and data. For instance, we are thinking of a scenario with more effective protection of carbon rich areas. IIASA: there is now a sophisticated deforestation monitoring system in Brazil that explains the decrease in deforestation observed there but is not present in other tropical basins. We encourage you to suggest realistic assumptions. By 2020, an end to deforestation seems very unlikely but by 2030 there is a much wider range of possible. Stakeholder: you can discard Malaysia till 2018 due to anti-dumping regulation. IIASA: this only applies to exports of biodiesel, only a fraction of the palm oil exported to EU.

Taking into account existing and future policies

- Stakeholder: how do you take into account effects that are already taking place? We have a lot of certified products in the EU. Deforestation in Malaysia that has taken place, how will that be incorporated in the model?
 - IIASA: such elements will be defined in the baseline; it is therefore important what we assume there as it will be used as a benchmark against which we assess biofuel scenarios.
 - Ecofys: NREAPS will not be a very good starting point for that the baseline. They include a target for 2020 but not for 2030. We will take existing policy as a starting point, but if there are good reasons to include other policies we will do that.
- Stakeholder: we will not have EU biofuels policy targets for the post-2020 period.
 - Ecofys: indeed, still we have to come up with some assumptions for 2030.
- Stakeholder: you may want to ask the Commission what they consider to be a good target for 2030.
 - Ecofys: input from the Commission in designing our policy scenario(s) is certainly envisaged.

Product and co-product substitution

- Stakeholder: The way feed and its protein content was modelled in IFPRI was criticised. How do you treat this in GLOBIOM?

- IIASA: there could be a very simple way if we just take single substitution ratios. But the substitution patterns are indeed much more complex and your help would be very useful.
- Stakeholder: we have a big stock of meal but overshoot of oil. What is your assumption on stock management?
 - IIASA: we do not represent year-to-year stock variation and only assume that the stock remain balanced over the 10 year period.
- Stakeholder: we think that the substitution effect for vegetable oil is overestimated. Rapeseed oil used for biofuels comes from large increase in area cultivated in EU. There is no substitution with palm whatsoever so the proposal by the Commission to treat them as one and the same is not a good thing.
 - IIASA: from an economic perspective, if prices on the markets are closely correlated, that's the sign that some economic operators substitute. The question is to know to what extent this substitution can indeed occur. It is well-known for example that the biodiesel sector can to a certain extent substitute. It could be different for the food industry.
 - Ecofys: we would really like your input on this because we need data to back up our assumptions.
 - Stakeholder: our website has many studies on nutrient content of rapeseed oil. Also study published by FAO from a Professor at the University of Bonn contains interesting information.
- Stakeholder: do you assume all oils are interchangeable?
 - IIASA: For oil we have demand per end-user, which includes consumers in the supermarkets but also agro-food industries. We don't know at the moment how different consumers react to different prices, literature is scarce on this. You may want to know if industry responds more than the final consumer. In the most standard model design, markets are separated and don't communicate, or as an alternative, we can also assume perfect substitution. It would be interesting to see if we can include a more refined presentation of reality. Imperfect substitution is on the list of suggested improvements.
 - Ecofys: would need better data to reflect this in the modelling and information on this from you will be very much welcomed.
- Stakeholder: would using fatty acid composition be a possible indicator to reflect imperfect substitution?
 - IIASA: if you can provide us information on what are the substitution patterns on the basis on fatty acid content, and what are the content on each type of oil that matters, we could implement this in the model.

GHG emissions

- Stakeholder: You take emission factors from IPCC right?
 - IIASA: yes, we use at minimum Tier 1 emission factors (IPCC default coefficients), but for most sources, we are able to go at Tier 2 level data (region and source specific information); for some sources and regions we even have Tier 3 level data (refined through specific modelling or measurements).
- Stakeholder: do you have your own validation system? Data for regions outside EU (Nuts 2) may be less reliable.
 - IIASA: the quality of information on emissions outside the EU varies indeed. For land cover maps, we have a tool to improve the quality of the data and use crowd sourcing to check our datasets. We also use simulated input, e.g. for the yield, to fill some information gaps. EPIC indeed allows calculation of different crop yields (based on biophysical information) in each grid cell.

Other points

- Stakeholder: does EPIC distinguish between different vegetable oil crops and how?
 - IIASA: yes, EPIC contains crop specific information and therefore, specific yield estimates for rapeseed, sunflower, soybeans, etc... However, this lets open the question of seed characteristics and how efficient can be their conversion to vegetable oil. For crushing conversion rate, we rely on average conversion rate reported in FAO statistics.
- Stakeholder: at the grid level you use a stochastic approach. What is it the real driver for farmers that decides what crop they use and how do you incorporate that in the modelling?
 - IIASA: we use at the grid level an optimization under constraints approach. Production costs are calculated to match the current production patterns, as observed in the allocation model SPAM and for EU, as specified by the rotation model CropRota. When these costs are calibrated, farmers replicate the calibration year as the results of a optimisation behaviour. If crop prices change, as a result of a change in demand for instance, profitability of the different crops is changing and farmers allocate their land differently across crops, and/or expand cultivation if it is also profitable to expand.
- Stakeholder: in addition to feedstock specific ILUC figures do you also calculate region specific figures?
 - Ecofys: could be added to the list but for the moment we aim for feedstock specific figures only.
- Stakeholder: would like to repeat question of colleague about differentiation of regional values. The place from where we import matter a lot for the GHG emission.
 - IIASA: that's true but there is also the indirect effect of import to keep in mind. It depends in particular on how globalised the oilseed market is. A change on imports from the US or Argentina can have an effect on the global oilseed market and drive production incentives in other part of the world. Of course there are trade barriers and transport costs, but not significant for all cases and the model will take these into account anyway.
- Stakeholder: MSs have to report where the crops from biofuels came from. You could calculate back how much land was used.
 - IIASA: that is different approach than our modelling approach. Direct accounting sounds attractive but in practice this will only give a dLUC value and the iLUC will be missing.
- Stakeholder: the advantage is that you have a certificate so you can calculate how much oilseed has been used for biofuel. Main question: why do you complicate things with modelling if you have this information?
 - IIASA/Ecofys: we have to include indirect effects and calculate future production to capture the full effect on the system. With an LCA approach the question always is "where do you set the system boundaries"? If we were looking for some local impacts, we could just look at effects on the project location. But when coming to GHG emissions, only total change at global level matters, that's why you need to incorporate interactions with other regions of the world and other markets.

Stakeholder input

- Ecofys: we are more than willing to sign NDAs if data that you think could be relevant to this modelling is sensitive.
- Stakeholder: We would like to know what happens with our suggestions.
 - Ecofys: we understand and would like to stay in contact with you and other stakeholders. We foresee an additional round of stakeholder meetings to this end.

- Stakeholder: after the changes are decided upon, will there be another iteration with the stakeholders?
 - Ecofys: we foresee another round of stakeholder consultations to discuss the draft Inventory of changes to GLOBIOM and draft baseline and policy scenarios. After this second round of consultations a final decision will be made on changes to GLOBIOM and scenarios to be used. The consortium will then proceed with updating the model and perform the modelling and sensitivity analyses.
- Stakeholder: Will the second stakeholder consultation take the form of face-to-face meetings?
 - Ecofys: that is indeed our intention.

The consortium welcomes all information and suggestions from the stakeholders that could be relevant to the project, by the 1st week of December at the latest. Specific information related to biodiesel production (prices and conversion efficiencies) could be submitted later, by the end of January. Please send your input: ILUC@ecofys.com.

These minutes will be published on: www.globiom-iluc.eu