

Ensuring increasing and sustainable biomass production: The importance for international bioenergy trade

Workshop summary

The workshop was organized by IEA Bioenergy Task 40, as a side-event during the 15th European Biomass Conference & Exhibition in Berlin, Germany, Thursday 10th May 2007; 15:00-18:30

Summary written by Martin Junginger and André Faaij.

Programme:

Chairs: Uwe Fritsche (Oeko Institut) and Andre Faaij (Utrecht University)

The speakers and presentations were:

Overview of international developments in sustainable biomass production and certification
Martin Junginger (Utrecht University)

Findings Sustainable Palmoil Audits (based on RSPO/CieCramer/EGGL) in Asia
Peter-Paul Schouwenberg (Essent)

Return of experience on certification of imported biomass pellets in Belgium
Yves Ryckmans (Electrabel, Belgian national team leader task 40)

Sustained supply of bio-energy in growing competitive international markets
Bo Hektor (TallOil)

Sustainability Standards for Biofuels in Germany: Status and Perspectives
Uwe Fritsche (Oeko Institut)

Issues of relevance for evaluation and certification of the sustainability of bioenergy development
Ingmar Jürgens (FAO)

Ensuring sustainability of bioenergy – need for an international standard/assurance scheme?
Martina Otto (UNEP)

A strategy to ensure sustainability of bioenergy
Jean-Philippe Denruyter (WWF)

All presentations are available online at www.bioenergytrade.org -> events 2007 -> Sustainable biomass production & bioenergy trade

Introduction

The ambitious renewable energy targets and high oil prices have caused an increasing demand for biomass. Given to increase the sustainable biomass production and the limited biomass (and land) resources within the EU, the international trade in bioenergy commodities such as wood pellets, ethanol and palm oil has increased tremendously over the last years. However, concerns regarding the sustainable production of biomass both within the EU and abroad have caused several government of EU members (Belgium, the Netherlands, the UK and Germany) to start formulating schemes to ensure the sustainability production of biomass, including certification of sustainable biomass. In parallel, also market parties such as Electrabel and Essent have voluntarily started to develop their own biomass sustainability labels. So how do sustainability criteria influence international bioenergy trade? And how compatible are these schemes with existing international trade agreements? How do NGO's see this process? During this workshop, the aim was to highlight the latest developments and discuss the impacts. Participants from industry, policy makers, NGO's and academia participated in the well-attended event.

Brief summary of the presentations

Martin Junginger started the workshop by providing a comprehensive overview of the ongoing developments regarding sustainability criteria and certification systems for biomass production and trade, focusing on the Netherlands, the UK and the EU. He also illustrated possible barriers and boundary conditions for biomass sustainability certification, and illustrated different approaches for implementation. He stressed that there are currently many different initiatives, which need to be harmonized, and pointed out that for many sustainability criteria, there is still a lack of operational indicators and verifiers, which need to be developed. *Peter-Paul Schouwenberg* then shared his experiences on sustainable palm oil audits. He explained the motivation of Essent to be certified (e.g. better access to markets, indicator of good corporate governance), and the different steps in the certification process and the audits of palm oil plantations carried out by Control Union. He illustrated how there are different perceptions of the palm oil industry in Malaysia and Indonesia, and the complex set of drivers behind the expansion of palm oil plantations in both countries. CU audited about 5% of the total palm oil area, and found much room for improvements regarding the soil erosion, herbicides, fertilizers etc. On the other hand, palm oil plantations also prevent the further burning of large areas and have a desire to improve their practices (e.g. comply with RSPO principles). *Yves Ryckmans* then continued the industry perspective, giving first-hand experiences how Electrabel has set-up and implemented their own certification system for sustainable woody biomass, including monitoring of the energy inputs and GHG emissions of the entire production and logistic chain, but also compliance with ecological and social criteria. He emphasized that evaluating energy use of pellet plant, and local and international transportation is far from trivial, given the many variable sin the process. He concluded that Electrabel had managed to certify about one million tonnes biomass imported to Belgium from more than 30 suppliers in the whole world at a cost of less than 0.5 €/ton of imported biomass, but also emphasized that it had been a long and iterative process to get the system working. *Bo Hektor* as third speaker from the industry mainly focused on the possible draw-backs of (mandatory) certification, e.g. that there are no sanctions for cheaters if compliance is not strict, it may present obstacles for entry of new SMEs, it increase the responsibility of NGOs and individuals, but reduces the roles of other stakeholders, and (in the case of Borneo) it was not able to prevent deforestation. *Uwe Fritsche* provided a detailed status and perspectives overview of sustainable Biofuels in Germany. He explained amongst others that in Germany, sustainability criteria are mandatory under the German Biofuel Quota Law, but still need to be developed, possibly (partially) harmonized with developments in the UK, the Netherlands and the EC. *Ingmar Juergens* then continued describing the activities of the FAO regarding bioenergy, focusing a.o. on the BEFS project on Bioenergy and Food Security, in which on the short term several case studies will be carried out as a pragmatic and concrete learning process of organizing

data, analysis and cooperation. *Martina Otto* followed, describing the view of UNEP on the implementation of an international standard/assurance scheme, following the 3 pillars of sustainable development and building on existing initiatives as to avoid duplication and build synergies. Finally, *Jean-Philippe Denruyter* presented the view of the WWF on the potential positive and negative impacts of biomass production. Taking palm oil as an example, he illustrated that increase in demand for palm oil (also independently of biodiesel developments) will add pressure on land use in producing countries. While degraded land is available (e.g. deforested areas for timber), companies prefer to develop oil palm in forested land, and to sell the timber first (and many times without exploiting the land for oil palm afterwards). On the other hand, increased efficiency in plantations is possible, and plating on degraded soil can also have several benefits. The key question thus is how to we ensure that palm is grown on idle land in an efficient way. The recommendation from WWF was to a global bioenergy sustainability initiative, under which EU negotiations with other countries should also take place under, but also encourage bilateral negotiations with e.g. (Brazil, South-Africa, Indonesia etc) to tackle problems such as “displacement”.

Observations and opinions given by the audience

- NGO's warn that current demand for biofuels is too high, and developments are moving too fast. Before large-scale production of biofuels should be stimulated, first, test cases are crucial, especially on marginal land, to demonstrate how sustainable production can be carried out in practice.
- It was argued that sustainability criteria for biomass production should not only apply for biomass for energy applications, but also for food, forestry and feedstock. On the other hand, there may be valid reasons for governments to differentiate between application for energy and food purposes.
- Formulation of strict sustainability criteria for biomass for a large range of topics (i.e. not only GHG emissions, but also social and ecological criteria) is in sharp contrast with the fact that we do not apply such criteria for the production of coal, oil or gas. For example, how would coal production in China or central Kalimantan score on these criteria? Sustainability criteria should be applied equally to all fuels.
- The production of palm oil in Malaysia has been a significant factor in the economic development of the country. Indonesia should not be blamed for following this example.
- Certification of commodities such as wood or coffee is a way to increase the consciousness of the consumer, but it is not able to avoid ecological disasters, as currently can be witnessed in Kalimantan. We must therefore think carefully about the actual verification procedures and governance required to make criteria for sustainable biomass production really effective.
- As an alternative to certification, if the aim is for example to protect natural forest or afforestation, the local stakeholders (e.g. the local villages) have to be provided with concrete financial incentives (e.g. a reward if their forest is still standing/land has been afforested), and local stakeholders (also governments, industry, NGO's and banks) should be included in such an initiative.
- Responsible biomass traders and end-users currently face a choice: 1) either postpone biomass use and wait until national/ international criteria have been set, and case studies have been successfully implemented, but running the risk that unsustainable competitors will take over the market, or 2) (continue to) use biomass and develop their own sustainability assurance

scheme, probably starting with only a limited amount of criteria and low targets, running the risks that this may not be enough to comply with upcoming legislation (and demands from NGO's). Most of the audience present favored the second strategy.

Conclusions

The last two year shave led to unsurpassed progress and debate on integral certification and global frameworks. There are currently many developments promoted by governments, market players & international bodies. Developing certification schemes for sustainable biomass production is going very fast, and has reached up to the highest levels (e.g. World Economic Forum). While most of these schemes plan for mandatory reporting only for the next few years, from about 2011 onwards, compliance with sustainability criteria will be required in several EU countries, possibly even within the entire EU. One important prerequisite for this is the harmonization of the many different initiatives which currently exist and are being started. To do so, on the short term all stakeholders involved should seek dialogue to agree on international sustainability frameworks. Furthermore, many of the criteria set can only be measured on the macro-level and not in the biomass production sites only. This is a completely new set of issues, which requires new methods, tools and governance systems. Further research is needed now to allow for a comprehensive impact / sustainability evaluation of bio-energy (e.g. as announced by the FAO and UU/Copernicus). Thus, national governments and international bodies should rapidly initiate major demonstration programs, in cooperation with developing countries, to develop and demonstrate the sustainability frameworks. In doing so, a sense of realism is important. This is complex and new field and way of looking at land-use, agriculture and governance and a reasonable learning period to develop experience in the market is required. Given the strongly increasing demand for biofuels, initiating the development and demonstration activities as well as an international dialogue on a comprehensive sustainability framework is urgent.