

## Kingsman Q&A with Meo Consulting:

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***“Laws are like sausages, it is better not to see them being made.”*** *Attributed to Otto Von Bismarck, first German chancellor.*

Creating international laws for the sustainability and greenhouse gas (GHG) measurement of biofuels is not a simple task, but a difficult bargaining process. Countries such as Germany, the UK, the Netherlands and Brazil have been working on creating national and internationally regulatory schemes, and enshrining sustainability criteria in domestic legislation and/or as a condition for the use of biofuels.

In Germany, a sustainability order setting specific sustainability requirements and minimum GHG savings was developed last year, in what some say was a rush. Discussion about the practical implementation remains open, and Kingsman talked to Dr. Norbert Schmitz, Project Leader with **meó Consulting** about these issues. Schmitz has been a partner at **Meó**, an independent consulting company, for 7 years. He has worked in the renewable energy, energy, agricultural, oil industry and automobile sectors.



**Meó** has been active in the biofuels and sustainability sectors for several years. It is implementing an international pilot certification project covering sustainability and GHG savings of biomass and biofuels. Several companies and institutions from the EU, the Americas and Asia are already actively involved in the project, aimed at developing a practical solution for the tremendous sustainability challenges.

### **Kingsman: What are the key drivers behind establishing certification of biofuels?**

Meo: Given increasing criticism of biofuels recently, current proposals for the reorientation of biofuels policy at German and EU levels require sustainability certification of biofuels. Assurance of sustainable biomass production for bioenergy and also reduction of GHGs is highly emphasized. Rather than setting mere volume or energetic quotas for biofuel usage, GHG saving targets will dominate future policies.

**Starting with this key element, GHG savings, there is as yet no internationally agreed methodology for evaluating specific biofuels in terms of GHG benefits. A variety of models give quite differing results. How is this starting block being overcome?**

Yes, this is true. If we don't have an internationally agreed methodology, there won't be a fair system. The ISO standards for the Life Cycle Assessment (LCA) are much too vague. For the EU, a coherent approach is required to ensure that we do not have 27 countries each doing an LCA in a country-specific way. Globally, there is an initiative called GBEP - Global Bioenergy Partnership - to harmonise methodology for GHG calculations which I think is an appropriate way forward.

Only a few key features in LCA of biofuels production have a tremendous impact, in particular the biomass used, the energy source for the conversion process, and by-products. Several issues relating to LCAs are still controversial, such as how to handle by-products. Should allocations be made on the basis of energy content, mass balance or market values? Are animal fats waste material, and should the pre-chain therefore not be included in the overall LCA? These and other questions have to be answered.

**There have been increased demands recently to assess biofuels in terms of their direct and indirect land use change (LUC) impact. How can such issues be accurately assessed?**

Land use change is particularly relevant to GHG saving. The deforestation we have seen so far has been mostly caused by the wood industry, and the food and feed sector, and not by biofuels. Increasing global population, increasing welfare in developing economies and the resulting shift in nutrition composition (more meat consumption) has led to a tremendous pressure on land. When we consider ways and means to reduce our carbon footprint we should not look only at the energy sector. Within the EU, 60% of all cereals are consumed for feed purposes. A reduction of our meat consumption would have a very positive effect on our carbon footprint.

Biofuels are also blamed for rising commodity prices, but poor harvests and rising demand from emerging economies are the main fundamental market drivers. The high volatility has also attracted speculation from financial investors. Rising prices for agricultural commodities, even though an immediate burden for the poor, are not only bad. They set incentives for farmers to increase production. This is very much desired.

It's also argued in the media that biofuels cause hunger. More than 850 million people are suffering from starvation, and serious efforts should be undertaken to reduce this figure. But starvation has nothing to do with biofuels - it is caused by political and structural problems, not by taking biomass away from nutrition purposes to energetic uses.

**The German Sustainability Order proposes that "good" biofuels, based on the highest GHG savings, be awarded a price premium. Does this threaten EU production?**

Assuming that the default values set in the German Sustainability Order reflect the actual situation of GHG saving potentials of producers in Europe and overseas, the rules laid down in the order are a tremendous threat for EU producers.

If biofuels producers in South-East Asia and Latin America can prove no LUC through certification, imported biofuels will have considerable advantages compared to European production, given their higher GHG saving. The proposed default values would mean that say, Brazilian ethanol would have double the GHG savings of an EU wheat ethanol producer. A fuel company required to reduce GHG, per energy content, would be prepared to pay a price premium for Brazilian ethanol, which is already most cost-effective.

The commercial impact would leave the (EU) industry struggling to compete and it would most likely collapse. Imports from Brazil and SE Asia (cane ethanol, palm and soyoil biodiesel in particular) would take over, which would result in increasing pressure on land and land conversions. This is the opposite of what many politicians were aiming at when requesting that biofuels should be sustainable.

## **If GHG-based certification is not the answer, what's the best solution to address LUC, food and fuel issues, and to evaluate different biofuels?**

There should be orientation towards GHG efficiency in general. I've seen several GHG balances of some EU biofuel producers and they are improving a lot. Most EU producers could achieve the EU proposals of 35% GHG savings. So there is innovation, and this will grow with the right incentives, but you cannot kill off the industry first.

Certification is the instrument to address the market failure that sustainable and unsustainable production is not differentiated in the global commodity market. It allows you to ensure production in certain parts of the world is in line with environmental and social standards, and to differentiate between good and bad biofuels. Certification must address land use change. A specific challenge is how to address indirect land use changes.

## **What are the major obstacles and what's the best approach?**

When legislation was being drawn up, there was not really a proper understanding of what the commercial impact would be. The answer is to look at the likely impact in the market and consider how to set regulatory framework conditions.

Biofuels producers should be able to prove no land use change occurred. Without a solution for LUC, it will be extremely difficult to get public support for biofuels. If this certification does not succeed, biofuels are hardly marketable in the future.

It's also important to prevent a situation where production of biomass for biofuels becomes sustainable but the non-sustainable production is merely relocated to other areas. The approach already followed to some extent by the EC, to set sustainability requirements not only for biofuels, but for all uses of biomass in energy and also other sectors (food, feed and biomass for industrial use) is going in the right direction.

## **Can policy-makers meet the tremendous sustainability challenges?**

We need an alternative to fossil fuel. An oil supply crunch by 2015 can't be ruled out, with forecasts of \$200/barrel for the next decade. This is something we have to take into account and therefore we have to build alternatives.

Brazil's ethanol industry wasn't built in a day. It's been safeguarded by several measures and support schemes by government and is very competitive now. Many people and companies in Europe are involved in biofuels and developing new plants, technology, higher yields, new enzymes from biomass, and so on. You will only see this kind of innovation if you keep a certain production base. EU production is required to allow improvement of both first and second generation biofuels.

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