ILUC and sustainability certification – consequences for all areas of use

Introduction

Apart from the production of biofuels, the use of renewable raw materials is also increasing in other areas, such as their use as a substance. The aim is to reduce the burden on the environment, e. g. by manufacturing vegetable oil-based engine and hydraulic oils or phosphate-free detergents with the help of surfactants based on fatty alcohols. In creating a promotional backdrop for the use of renewable raw materials, demands on sustainability must therefore also be included.

Sustainability policies for the use of biomass as an energy source initiate the introduction of analogous demands in other areas of use. The use of palm oil illustrates this clearly: only 3–5 percent of the world-wide production is used for energy, while 21 percent is used for the production of substances. This means that by far the largest part is still used in the food market, which is growing strongly at the same time. It is therefore only logical to introduce evidence of sustainability for the use of renewable raw materials as substances following the model of biofuels. It must be noted that raw material cultivation generally takes place without a distinct intended purpose. This decision is not taken until the stages following the processing of the raw material.

It is the conviction of UFOP that iLUC or greenhouse gas penalties are in no way suitable as evaluation criteria for the entry into the market. iLUC factors only trigger displacement and evasion on the international markets. However, they are not able to prevent the further clearing of primeval forests. European oilseed producers cannot be made co-responsible for the misguided environmental policies in third countries. The iLUC discussion about biofuels is representative for all possible uses of the cultivated biomass.

If one thinks about the iLUC approach of the European Commission and its logical conclusion, political considerations such as greening and ecological land cultivation would also have to be included alongside the use for biofuels and technical uses, as an expansion of production would, of course, trigger the need for increased land areas for food production.

UFOP position

1. Biofuel policies as initiator

Establishing EU biofuel targets in 2009 triggered a discussion on the possible effects of world-wide land usage (indirect land use changes – iLUC), the impact of which must also be taken into consideration consistently when establishing a promotion strategy for other areas of use of renewable raw materials. In the area of biofuels, sustainability demands were founded in law, the compliance of which is necessary for biofuels to be taken into account as an achievement of national targets.

2. On-going discussion on land usage effects

Scientific evidence of a cause-effect relationship of indirect land use changes (iLUC) has been the subject of extensive expert discussions for years. According to proposals of the EU Commission for the amendment of EU biofuel policies, biodiesel would even show a negative GHG balance compared with fossil diesel when taking an iLUC factor into consideration. If one assumes a prejudicial effect of biofuel iLUC factors on other areas, then a product-specific differentiation in the GHG balance would also, of course, be necessary for other uses of cultivated biomass, e. g. when used for the production of substances.

3. The selection of raw materials will be limited

The increased demand for agricultural raw materials comes with the problem that this raw material dependence must inevitably lead to an increased iLUC value. In this respect, not only is the utilisation for energy or as a substance faced with the dilemma that, when factoring in a critical GHG evaluation, certain biomass raw materials and the products manufactured from them would prospectively be viewed critically and be omitted in the long term because of their climate balance.

4. GHG evaluation also for use as a substance

Biofuels are evaluated for their greenhouse gas (GHG) balance (including a possible iLUC factor) based on a fossil comparison value. For renewable raw materials used as a substance, the fossil-based product should also be used in the calculation as a comparator for evaluating the GHG balance of the biomass and the final products, provided that this is authorised. This leads to the question whether even in this case a minimum GHG reduction with proof should be established as a precondition for market entry. The renewable energy directive even contains increasing targets for the reduction of CO_2. Although so far no requirements exist for the use in the production of substances, the targets for biofuels have triggered extensive activities in the affected industries to press ahead with GHG optimisation, starting already at the raw material stage.

5. Climate balance as a benchmark for promoting product development

Sustainable development of the potentials for biomass raw materials is the basis for creating the necessary investment confidence. The further development of a strategy for a national and European bio-economy must follow this model. To establish a strategic direction at national level (biomass action plan for the use of renewable raw materials as substances) and at EU level (Lead Market Initiative – LMI), a debate analogous to the »iLUC and sustainability debate« must therefore be prevented. It must at least be prevented that a GHG/iLUC debate takes place after developments have already been kick-started for products which, when considering iLUC factors alone, would not have experienced market entry.

But can the GHG balance be the only benchmark for a product evaluation? Here, the overall benefit generated with the use or the promotion of the product must be examined by all means. By-products arising during the manufacture must also be given appropriate consideration in this evaluation. In the case of production of rapeseed oil methyl ester (RME) for use as a substance or for energy purposes, these would be the protein component rapeseed meal (protein) from the crushing of the rape seed and glycerine from the transesterification process.

6. Requirements for certification

With the use of cultivated biomass, questions must be raised concerning the certification of the origin of the raw materials. There is a great danger that the final products are »greened« through intransparent mass balances and/or through »book and claim« methods, i. e. through certificate trading. The final intended purpose is not necessarily known at this point in time. Not least for this reason, a limited time period for the physical balance is intended and necessary.

But negative effects can, of course, be triggered even when using waste and residual materials. For this reason, particularly these biomass sources are the subject of current relevant studies – see reports of the Deutsches Biomasseforschungszentrum (DBFZ) – www.ufop.de.

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