

Climate Change, Agriculture and Trade.

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EU sustainability criteria for biofuels.

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The emergence of an EU wide policy

In the EU climate change has been the principal policy driver for promoting the use of energy from renewable resources. The consequences of climate change, increasing dependence of fossil fuels and rising energy prices have led to a growing awareness of the necessity of an EU wide integrated approach of climate and energy combining action at European and Member States level.

The spring European Council of 2007 set ambitious targets by 2020 of a 20 % reduction of greenhouse gas emissions compared to 1990 levels, a 20 % renewables share in the EU's final energy consumption including a 10 % share of biofuels in each Member State. In January of this year the European Commission tabled a comprehensive set of proposals to achieve the policy goals set last year by the European Council.

The proposed draft Directive on renewables establishes an overall 20 % **binding target** in renewable energy sources in energy consumption in 2020 for the **EU as a whole** and a 10 % **binding** minimum target for biofuels in transport to be achieved in 2020 by **each** Member State. These targets were reaffirmed by the March European Council of this year.

As far as renewables are concerned the Commission proposals provide for a fair distribution of efforts between Member States establishing national overall targets for each of them (GDP per capita being the main criterion). Three sectors are concerned: electricity, heating and cooling and transport. Member States retain discretion as to the mix of these sectors except for transport where the minimum binding target of 10 % in 2020 has to be achieved. Transport produces nearly one third of the CO₂ emissions presenting the most rapid increase of all sectors of the economy. Moreover the transport sector relies heavily on imported oil. The objectives set in the biofuel Directive of 2003 - 2% in 2005 and 5.75 % in 2010- are far from being met. The EU biofuel share in 2005 was less than 1 %.

Environmental sustainability criteria

Specifically for biofuels and bioliquids the draft Directive establishes environmental sustainability criteria to ensure that biofuels that are to count towards the target are sustainable. They must achieve a minimum level of greenhouse gas emission reduction

(35 %) and respect a number of binding requirements related to environmental impact and biodiversity. The draft Directive aims for a **complete harmonization** of biofuel sustainability criteria in order to ensure that no national criteria may constitute an obstacle to trade. This implies also that no additional sustainability criteria may be set by Member States in relation to third countries. This also implies that once the draft Directive has been agreed upon and implemented by Member States (in 2010) any disputes arising from it –for example in WTO context- will fall under the exclusive EU competence and will be dealt with by the European Commission. It implies as well that any international agreements related to biofuel sustainability standards will be negotiated by the European Commission and concluded by the European Community. Thus harmonized sustainability criteria constitute an important step forward also in the perspective of wider international standards.

Biofuels and other bioliquids have to fulfill the sustainability criteria for:

- the measuring of compliance with the national target requirement
- measuring compliance with renewable energy obligations
- eligibility for financial support for the consumption of biofuels and other liquids.

In order to achieve a 10 % share of biofuels the draft Directive provides for higher blends of biodiesel in diesel than the present standard. The fuel quality Directive of 1998 will be adapted to allow for a higher incorporation of biofuels blended with fossil fuels. Member States may encourage the use of second generation biofuels (such as wastes, residues, lingo-celluloses material) which offer greater energy potential and more environmental benefits. These biofuels will receive an extra weighting under national biofuel obligations.

The sustainability criteria aim to reduce greenhouse gas emissions and to prevent loss of valuable biodiversity and undesired land use changes.

Greenhouse gas reductions

The greenhouse gas (GHG) emission savings from the use of biofuels shall be at least 35 % compared to fossil fuel. To calculate de GHG reduction Member States can opt for the default values given by the Commission or follow a detailed calculation methodology in which most aspects of the well-to-wheel analysis are considered. The default GHG reduction values are only allowed to be used when raw materials are cultivated outside the Community or in those regions designed beforehand by Member States. These areas within the Community need to have equal or lower emissions for cultivation than those assigned by the Commission.

The default values represent the GHG reduction per production chain, including direct soil emissions, and are based on the energy allocation of byproducts.

The GHG reduction is reached by applying the mix of renewables, not by individual raw materials. Producers must prove the biofuel sustainability including mass balance considerations of the biofuel mix.

Biodiversity and land use impact.

In order to prevent valuable land for biodiversity being used for biofuel production the draft Directive excludes several categories of land: protected areas, pristine and restored forests and highly biodiverse grasslands. Moreover specific land use changes that would result in high carbon losses-wetlands and continuously forested areas as defined in the draft-are also excluded. § § § § § § § §

In practice these exclusions lead to the following types of land available for biofuel production:

- abandoned agricultural area's (crop production area's or pasture)
- natural grasslands with low biodiversity value
- moderately degraded soil.

Support instruments.

The choice of support instruments to achieve the binding 10 % target in 2020 is left to the Member States under supervision of the Commission. These measures can take the form of tax exemptions, biofuel obligations, farming subsidies and subsidies for the development of renewable energy technology. They may give additional benefits to second generation biofuels. They should not discriminate between Member States (and give national treatment to WTO members). Obviously they will have to transpose the EU sustainability criteria into national law.

Member States will have to submit a report to the Commission by 30 June 2011 at the latest and every two years thereafter.

Presently there is a great variety in support measures and incentives amongst Member States. Some of the national measures are questionable both under EU and WTO law as they give a more favorable treatment to national producers. Moreover the Commission proposals fail to address the question of border protection. (MFN tariffs on bioethanol are relatively high).

Dependency on imports from outside EU.

For a foreseeable future the EU will have to rely on first generation biofuels to achieve the 10 % target in 2020: vegetable oils for biodiesel and sugar and starch crops for bioethanol. These import requirements may be between 30 and 50 %. Much depends on the assumed contribution of second generation biofuels. One has to distinguish between biodiesel and bioethanol. Notwithstanding increased domestic production of rapeseed vegetable oils will have to be imported from Eastern Europe and Asia. As far as bioethanol is concerned Brazil will be the main source of imports. Moreover there are question marks on the domestic availability in the EU of bioethanol as prices for corn and wheat have gone through the roof. Investments-and even current production- of ethanol have been put on hold in many instances. While in the medium term sufficient agricultural land will be available within the EU, food production claims on the available

land will be at odds with biofuel requirements. Moreover other sectors than transport will have their claim as well on available biomass.

Hence the importance for the EU of imports and trade related aspects.

It will be equally important to assess in how far a more biobased economy can be shaped in such a way that developing countries can reap the benefits of it.

Some policy considerations.

Recently several scientific publications on both sides of the Atlantic have been critical of the promotion and the production of first generation biofuels. The critics address the actual GNG emission savings, the environmental impact and the impact on food prices and food security. Some argue that the potential of reduction of GHG emissions is very low or even negative. The impact on water availability and soil fertility is not taken into account. The likely increase of the use of fertilizers is not taken into account either. There are serious reservations concerning biodiversity losses from land use change. While the proposed land exclusion criteria may effectively target types of land containing high soil carbon stocks or high biodiversity values, these systems may still be under pressure from biofuel production through displacement of food production area's. The recent steep rises in food prices, for which biofuels are only partly responsible, constitute a severe burden for the poor and have added to the concerns about food security. Moreover scientific findings lead to the conclusion that stationary use of biomass in heat supply and combined heat and power generation harbor a greater potential of energy and GHG savings.

Many of these concerns are quite legitimate. But we should also acknowledge that there is not as yet an agreed method of calculation of GHG savings. As far as biodiversity losses are concerned much depends on the definition of highly biodiverse grasslands. Research on the environmental impact of intensified farming of renewable raw materials is still in an initial phase. At the same time we see a rapid growth of energy crop production promoted by a great variety of support measures.

There is an urgent need to introduce **binding** environmental standards. We cannot wait until we have found the perfect sustainability criteria at a global level. We need a starting point to build upon on the basis of experience, sound monitoring and advancing scientific evidence.

The proposed sustainability criteria by the European Commission may fall short in some respects, but they certainly constitute an important step forward. They will need to be adapted and upgraded on the basis of periodic evaluation and complemented by multilateral and bilateral international agreements to ensure mutual ownership and compliance.

A genuine concern of present policies and the proposed sustainability criteria is that they may give too much incentive to the production of first generation biofuels and risk to slow down the development of more advanced biofuels. Most of us would agree that biofuels from waste, residues, lingo-celluloses (so called second generation biofuels) offer more energy potential and more environmental benefits, without putting at risk our food

security. It is however a fact that such second generation biofuels are not as yet available in commercial quantities and that it may take some time to develop the necessary technologies. It is equally true that further technological advances in the production of first generation biofuels may further reduce their GHG emissions and benefit the development of second generation biofuels. National support measures should however focus on the latter. This can be done by promoting innovation and investments in second generation technology, by granting tax exemptions or –reductions to second generation biofuels and by progressively increasing the GHG reduction threshold.

WTO rules and biofuels.

Much debate has taken place on the WTO consistency of unilateral on product related production and process method (PPM) measures.

The IPC discussion paper of October 2006 gives a clear overview how WTO rules might apply to the biofuel sector. A recent Dutch study “Unilateral measures addressing non-trade concerns” (van den Bossche, Schrijver, Faber) examines more in particular the WTO consistency of the so called Cramer criteria for sustainable biomass production. These studies deal with the GATT rules on non discrimination (MFN and national treatment), rules on market access (tariffs and non-tariff barriers), rules on subsidies as well as the general and security exceptions (more particularly art.XXg GATT relating to the conservation of natural resources).

As far as the sustainability criteria are concerned the GATT non-discrimination obligations are particularly relevant as are the subsidy rules.

As far as the non discrimination obligations are concerned I would not wish to rehash the various arguments on the product vs. process distinction or to elaborate in lengths on the not very conclusive findings of the Appellate Body on the notion of “likeness”. As is known generally speaking the non-discrimination obligations only apply to like products. Let me just highlight some relevant aspects which emerge from these two studies.

In the EC-Asbestos case the Appellate Body ruled that the determination of “likeness” is fundamentally a determination about the nature and extent of a competitive relation between and amongst products and that PPM’s may have an impact on the preferences and tastes of consumers. In the US-Malt Beverages case the panel ruled that it was necessary to consider in the “like” product determination whether such determination is being made” so as to afford protection to the domestic production” In the Korea-Beef case the Appellate Body ruled that a formally different treatment of “like” products does not necessarily constitute “less favorable treatment”. Therefore it is necessary to assess whether a measure modifies the conditions of competition in the relevant market to the detriment of imported products.

As far as general exceptions are concerned art.XXg GATT (preservation of natural resources) is applicable “as far as it is not applied in a manner that constitutes arbitrary or unjustifiable discrimination (US-Shrimp case). In general the meaning of “preservation of natural resources” has to be justified by emerging legal and policy norms on sustainable development and biodiversity.

One may conclude as was done in the IPC study that “the key question of compliance with WTO regulation is whether or not the measure is drafted or structured in such a way as to be more burdensome on foreign than on domestic producers.”

Much will depend on the sustainability criteria in question and whether the difference in treatment derives from objective norms, criteria and methods. The existence of voluntary international schemes setting standards for biofuel products- and resulting from broad consultations with stakeholders- would give an indication of such objective norms, criteria and methods.

This would be a fortiori the case if internationally agreed sustainability criteria could be developed. Realistically reaching consensus on such agreements may be a very difficult and time-consuming task.

As far as subsidies are concerned (Agreement on Subsidies and Countervailing Measures-SCM) there needs to be a “financial contribution by government” and a “benefit” received by the recipient: the subsidy must confer a competitive advantage. It must also be “specific” and cause “adverse effects”. Tax exemptions which are presently introduced by quite a few EU Member States are certainly subsidies. It is however difficult to see whether they give a competitive advantage to EU producers of biofuels over producers in other WTO members.

As far as subsidies to feedstocks are concerned they have to be considered both on the SCM Agreement and the Agreement on Agriculture. If both Agreements apply, the latter prevails in case of conflict.

If the subsidies are part of a general agricultural support program it may be difficult to view such support as “specific” under the terms of the SCM Agreement and to argue “competitive advantage” for downstream domestic users. As far as subsidies on production of feedstocks are concerned one has to consider if these are “green box” or “amber box”. As long as the Doha Round is not concluded this distinction has no practical consequences.

While national support measures formally may not discriminate between domestic biofuel producers and foreign ones the combination of tariffs, tax exemptions and other support measures may give in practice a competitive advantage to domestic producers.

Some concluding remarks.

On both sides of the Atlantic important support measures have been introduced for the production of biofuels. While in the EU climate change and GHG savings have been the main policy drivers the focus in the US has been primarily on reducing energy dependence and creating additional outlets for domestically produced feedstocks.

There is a growing concern about the environmental impact of massive biofuel production and the impact on rising food prices and food security. Moreover there are doubts on the actual GHG savings of first generation biofuels, with the exception of bioethanol from sugarcane.

Hence the necessity of binding sustainability criteria. The ideal solution would be the development of internationally agreed norms, criteria and methods. Realistically this can only be done in the long term. In the meantime unilateral sustainability criteria will be put into place. They will be part of a learning process and should be based on emerging core principles and methodologies concerning sustainable development. Voluntary agreements and platforms amongst stake holders concerning particular feedstocks can show the way. But ultimately bilateral and multilateral agreements will be necessary in order to ensure mutual ownership and compliance.

The sustainability criteria under discussion in the EU constitute an important step forward notwithstanding their shortcomings. They should be implemented in a non discriminatory way without conferring undue competitive advantage to domestic producers and allowing developing countries export opportunities for bioethanol and biomass.

Biomass production in tropical and subtropical climates is far more productive than in temperate zones. This is particularly the case for sugarcane based ethanol, where the costs of production in such countries as Brazil, India and Pakistan are less than half than those in the EU and US. Moreover the energy potential and the GHG savings are far higher than of traditional starch crops and vegetable oils based biofuels.

A speedy transition to second generation biofuels is of particular importance. An unfettered growth of starch crops and oilseeds will put a disproportionate claim on the available agricultural land and have a negative effect on the environment, on food prices and ultimately on food security. National support measures should promote innovation and investments in second generation technology and by granting tax exemptions/reductions. Sustainability criteria should progressively ensure that only advanced biofuels are available for end-users.
