



SUSTAINABILITY OF BIOFUELS

Sustainability certification must incentivise better performance and seek to minimise the risks of adverse effects

It is a welcome step that the Commission is currently reviewing the sustainability of all bioenergy sources and final uses for the period after 2020, to account for potential sustainability risks such as lifecycle GHG emissions from bioenergy production and use; impacts on the carbon stock of forests and other ecosystems; impacts on biodiversity, soil and water, and emissions to the air; indirect land use change impacts; as well as impacts on the competition for the use of biomass between different sectors (food, industrial uses, energy). ePURE believes that strict sustainability criteria, which currently apply only to biofuels and bioliquids, should apply to all uses of biomass as well as fossil resources.

ePURE agrees with the Commission that *“the development of bioenergy also needs to be seen in the wider context of a number of priorities for the Energy Union, including the ambition for the Union to become the*

*world leader in renewable energy, to lead the fight against global warming, to ensure security of supply and integrated and efficient energy markets, as well as broader EU objectives such as reinforcing Europe's industrial base, stimulating research and innovation and promoting competitiveness and job creation, including in rural areas”*⁸.

Given this context, the updated bioenergy sustainability policy should take into account that increased feedstock demand for the production of European ethanol has had no adverse effect⁹. The future sustainability policy should also take into consideration the impact of the absence of a bioenergy policy on agricultural markets. It should also take into consideration and build upon the fact that the European Union already has a unique system that requires biofuels used in the EU to comply with strict sustainability criteria if they are to count towards the 2020 energy and climate targets.



8. Consultation document: A sustainable bioenergy policy for the period after 2020, European Commission (2016)

9. Renewable energy progress report {SWD(2015) 117 final}

POLICY RECOMMENDATIONS

- 1.** The latest available study to estimate the potential land use impacts of the EU's biofuels policy confirms that European renewable ethanol has low risk of adverse land use change impacts (LUC). As a 'low-ILUC risk biofuel', European renewable ethanol has high net GHG savings compared to the petrol it replaces and consequently it should be entitled to contribute towards the 2030 targets without any restriction.
- 2.** Consistent with both the spirit of and legal obligations of the existing regulatory framework, biofuels from investments made in good faith resulting from the 2009 Renewable Energy Directive, should also be entitled to count towards the EU targets provided they comply with the GHG thresholds set in the existing sustainability criteria (50% for existing installations under the current rules for calculating the greenhouse gas impact of biofuels).
- 3.** In order to meet the objectives and fundamental principles of the EU's sustainability strategy, the use of palm oil and its derivatives should be prohibited in the EU until global peatland conversion is brought under control.
- 4.** Feedstocks produced in the European Union and used in the production of biofuels must comply with the 'cross compliance rules' under the Common Agricultural Policy, thereby ensuring that their impact on soil, air and water is taken into account. These rules should also apply to biofuels produced from feedstocks of non-EU origin.
- 5.** Existing sustainability criteria for biofuels should be maintained (and where necessary strengthened to ensure robust and fraud proof certification) post-2020. Sustainability criteria and traceability requirements equivalent to those for conventional biofuels should be introduced for all advanced biofuels and bioenergy sources, as well as fossil fuels used in transport, in order to safeguard their environmental performance and ensure a level playing field between renewable energy sources.

Our assessment of the GLOBIOM study

A consortium composed of Ecofys, the International Institute for Applied Systems Analysis (IIASA) and E4Tech was commissioned in 2013 by the European Commission to assess 'the land use change impact of the EU biofuels policy' using an economic model called GLOBIOM¹⁰, property of IIASA. The project was completed in August 2015 and released in February 2016.

What GLOBIOM does and does not do

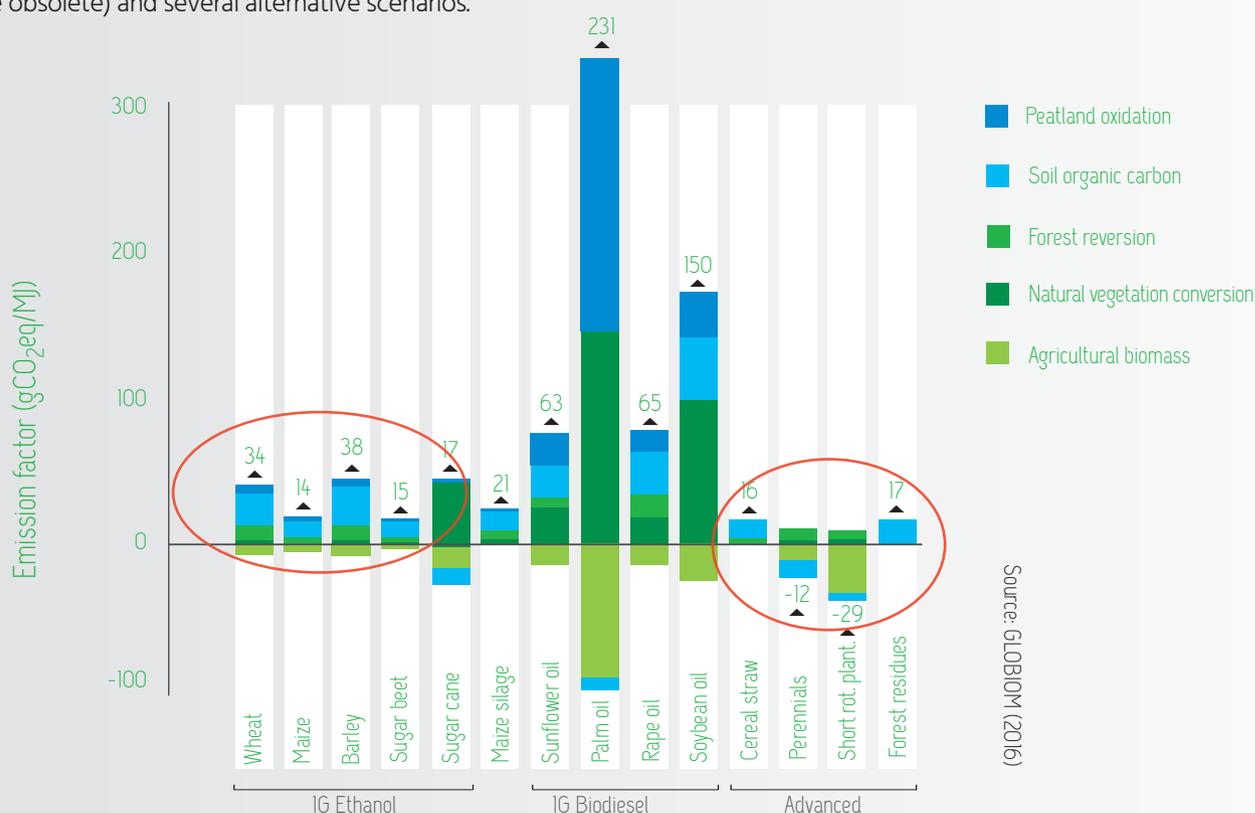
- ◊ The study estimates, within predefined model scenarios, the area and emissions impacts of the 2020 biofuels policy above a 2008 baseline, when the Renewable Energy and revised Fuel Quality Directives were adopted. The report does not assess the impact of the actual volumes of biofuels used in the EU market in 2008.
- ◊ It provides an assessment of the potential impact of the extra demand for feedstocks driven by the EU biofuels policy by 2020 on terrestrial GHG emissions: indirect land use change (ILUC) soil organic carbon (SOC), agricultural biomass, forest reversion, peatland oxidation).
- ◊ It uses a consequential life cycle analysis approach, which is different from the approach for determining the direct emissions and GHG savings of biofuels under the existing methodology of the EU legislation. One cannot 'simply' add the two to provide the "overall" emissions for biofuels.
- ◊ The impact of ethanol uptake alone to 2020 is not calculated. The report combines the results for biodiesel and ethanol in a central scenario based on the national renewable action plans of the 28 Member States (which are obsolete) and several alternative scenarios.

- ◊ The feedstocks specific results are simply an estimate of the associated LUC emissions **if** the EU biofuels policy was to create an extra 5 billion litres demand of a biofuel produced from this given feedstock. This is clearly not the expectation for some feedstocks that have seen their use for biofuels production decrease or increase modestly since 2008 (e.g. wheat and barley).

GLOBIOM is the latest approach to model LUC. Like all models, it has limitations and uncertainties, the major one being the introduction of the concept of "foregone sequestration"¹¹. There are also data gaps, some of which are unavoidable. But the authors have strived to handle assumptions objectively by consultation with stakeholders. Despite these inherent limitations, the GLOBIOM study is relevant for the 2030 EU policy framework discussion as it can assist policy makers in designing future EU biofuels policy. If read and applied properly to the reality of the European biofuels market, the report's findings allows for the identification of:

- ◊ Those biofuels making a strong contribution to decarbonisation and with low risk of adverse LUC emissions, such as European renewable ethanol.
- ◊ Measures that could mitigate the risk of adverse LUC emissions, such as halting peatland conversion, or favouring the use of unused land in Europe for the cultivation of crops used in the production of biofuels.

GLOBIOM confirms ethanol feedstocks have low risk of LUC



11. Foregone sequestration is the concept that assumes in the absence of demand for biofuels, cropland area might decrease and partly revert into grassland and forest. This 'much debated and poorly documented concept' has a large impact on the results provided for ethanol feedstocks.