

Q&A - Biofuels:

Dealing with indirect land use change (ILUC)

Update: October 2011

Why is the EU reviewing its biofuels policy?

Under the terms of the Renewable Energy Directive (RED), EU member states are required to source 10% of transport energy from renewable sources, mainly biofuels, by 2020. The RED includes 'sustainability criteria' that dictate the minimum CO₂ savings biofuels should achieve relative to fossil fuels in order to qualify for the scheme (and receive state subsidies). These criteria account only for the emissions that occur when land is converted specifically to grow biofuel crops (direct land use change). However it does not currently contain measures to calculate the impact of indirect land use change (ILUC). The law states that the European Commission must investigate and propose a way of dealing with the ILUC problem by the end of 2010, a deadline that has obviously passed.

What is ILUC?

The production of biofuels can indirectly cause additional deforestation and land conversion. When existing agricultural land is turned over to biofuel production, agriculture has to expand elsewhere to meet the existing (and ever-growing) demand for crops for food and feed. This expansion happens at the expense of forests, grasslands, peat lands, wetlands, and other carbon rich ecosystems. This results in substantial increases in greenhouse gas (GHG) emissions from the soil and removed vegetation.

What is at stake?

EU targets for biofuels, along with generous national subsidies, have helped create an industry worth €17bn a year in Europe alone. Many of these biofuels would no longer pass criteria for GHG savings if the emissions calculation methodology accounted for ILUC. Farmers who grow biofuel crops, and biofuels companies who process and distribute them, have been urging the EU to ignore the problem. But failing to address ILUC now will mean the EU's flagship renewables policy will end up making climate change worse and billions of Euros will be wasted. An area of additional land

twice the size of Belgium will be cleared, most likely in the developing world, to grow the lost food crops¹. Development groups such as Oxfam have warned of devastating impacts on poor communities in the developing world².

Is there a scientific consensus that ILUC is a real problem?

Numerous scientific and public bodies agree that ILUC is real and should be accounted for when calculating the emissions savings (or not) from biofuels. The list could hardly be more venerable, it includes the Joint Research Centre of the European Commission (JRC); the European Environment Agency; the International Food Policy Research Institute (IFPRI); the Renewable Fuels Agency, UK; the Netherlands Commission on Sustainability Issues concerning Biomass (CDB); the German Advisory Council Global Change (WBGU); the Food and Agriculture Organization of the United Nations (FAO); the United Nations Environment Programme; the Scientific Committee on Problems of the Environment (SCOPE); Oeko-Institut; the Smith School of Enterprise and the Environment; the California Air Resources Board and the US Environmental Protection Agency³

The European Commission has ordered five separate studies of its own and consulted extensively with scientists who also agreed that ILUC is a problem, and separate ILUC CO₂ 'factors' for each type of biofuel crop would be the best way of accounting for the issue when calculating the overall emissions from biofuels.

Is the industry against including ILUC emissions?

The industry is divided. Producers of biofuels that score badly on ILUC argue the science is uncertain, while producers of those that score well have indicated that they could support the inclusion of ILUC emissions⁴.

¹ See IEEP report briefing

² See Oxfam report

³ See T&E briefing on scientific reports on ILUC

⁴ See Reuters news story

Are biofuels being unfairly targetted?

It is worth remembering that the amount of biofuel used in Europe is mandated by law and the fuels themselves are often subsidised with public money, with climate being one of the key arguments. Many things people do have an impact on the climate. Eating beef is one example. But the difference between beef and biofuels is that the EU has not passed a law that forces everyone to get 10% of their calories from eating beef. If the EU has climate change laws to promote specific products, these products have to be sound.

Shouldn't the EU be targetting all types of transport fuel ?

It is. Article 7a of the Fuel Quality Directive, agreed at the same time as the RED, says emissions from the production of all transport fuels should be reduced by 6% by 2020. Though that law is also proving controversial to implement as the Canadian government objects to a higher carbon value for tar sands when accounting for the climate impact of fossil fuels.

What does the latest science on ILUC for the European Commission say?

The European Commission's Trade department requested a new study by the International Food Policy Research Institute (IFPRI) in order to assess the impact of various policy options for dealing with ILUC. That study was eventually published on 18 October 2011⁵.

Compared to previous studies carried out for the European Commission and by other bodies, the study's conclusions are conservative, estimating ILUC impacts to be considerably lower than other studies have suggested. Nevertheless, the IFPRI conclude that "emissions related to land use changes driven by biofuels policies are a serious concern". It also says that biofuels in terms of environmental benefits "may not be the best tool to achieve initial (climate) targets".

The IFPRI also suggest ILUC factors for different biofuel crops, for example the CO₂ impact of ILUC caused by sugar beet derived biofuel is listed as 7gCO₂e/M (equivalent to 7 grammes of additional CO₂ emissions for every megajoule of biofuel energy produced). The figure for palm oil derived biofuels is given as 54gCO₂e/MJ.

⁵ [See DG Trade website](#)

What is the European Commission's current position on ILUC?

Officially the EU has not yet taken a decision on how it will tackle the problem. But leaked minutes of a high-level meeting in July⁶ suggested that the Commission plans to raise the overall greenhouse gas threshold for biofuels without tackling ILUC head-on. In fact, there is no causal link between direct and indirect emissions and according to the scientific committee of the European Environment Agency such a move would make matters worse⁷.

Postponing action on ILUC itself, as that meeting also agreed, would compound the uncertainty and investment freeze the biofuels industry in Europe is currently experiencing.

What should the EU do?

In light of the wide body of research on likely ILUC impacts and the existing legislative mandate, the Commission should publish a proposal that would account for the full climate impact of biofuels, including the emissions resulting from indirect land use change. The policy should be fixed by introducing feedstock-specific 'ILUC factors' that reflect emissions from indirect land use change for different types of biofuel crops. The Commission should review these factors periodically, revising them as necessary in order to reflect the best available scientific evidence.

The practical effect of introducing ILUC factors is to promote biofuels that use little or no valuable land and effectively reduce GHG emissions compared to fossil fuels. This would ensure that the original policy objective for EU biofuels policy – to mitigate climate change – can be upheld, and makes investment in truly low carbon solutions much more secure.

www.transportenvironment.org/low-carbon-fuels

⁶ [See Reuters news story](#)

⁷ [See EEA scientific committee report](#)