Press release – Institute for European Environmental Policy (IEEP) [1]

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# New Report Concludes that Indirect Impacts of EU Biofuel Policy will Create Major Environmental Pressure

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The first study to review the indirect land use change (ILUC)[2] impact of the anticipated EU wide increases in the use of biofuels up to 2020, concludes that European policy does not adequately protect the environment against negative consequences. Based on newly released national plans ILUC will lead to substantial land conversion and, as a consequence, additional greenhouse gas emissions beyond those that would arise from the continued fossil fuel use.

David Baldock, Executive Director IEEP, commented that: '*Promoting the use of biofuels with no consideration of indirect land use change (ILUC) has the potential actually to increase the EU's greenhouse gas emissions. It is vital that this situation is rectified and ILUC impacts are urgently addressed within EU law. It is essential to remember that the renewable energy Directive, which is driving EU biofuel use, was adopted to help combat climate change.'*

This report[3] ***'Anticipated Indirect Land Use Change Associated with Expanded Use of Biofuels and Bioliquids in the EU – An Analysis of the National Renewable Energy Action Plans'***. It is available to download in full at www.ieep.eu

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Under EU law all Member States are required to derive 10% of their transport fuels from renewable sources by 2020[4]. Plans from national governments[5] setting out how they will reach this target are only now becoming available. These confirm that conventional biofuels (derived from crops such as wheat, rapeseed and sugar cane) will be the primary technology used in delivery.

A new report by IEEP concludes that between 4.1 and 6.9 million hectares of additional land will need to be cropped due to the increasing conventional biofuel demand, set out in national plans. This is equivalent to an area of somewhere between the size of Belgium and the Republic of Ireland. The report estimates that this would lead to additional annual emissions of between 27 and 56 million tonnes of carbon dioxide between 2011 and 2020, associated with land conversion[6]. This would be equivalent to having 12 to 26 million additional cars on Europe's roads in 2020.

Under the renewable energy Directive, which specifies the 10% target, biofuels are required to deliver some limited greenhouse gas reductions compared to fossil fuels. However, this only takes into account the direct emissions associated with their production, from original crop to final fuel. Missing from this calculation are other significant consequences, such as ILUC. This occurs when crops displaced by biofuel feedstocks are cultivated elsewhere, causing new land to be brought into arable production.

It had been hoped that the 10% target would be used by EU countries as an opportunity to adopt innovative solutions such as use of advanced biofuels[7], electric vehicles and would drive investment in energy efficiency. However, the report shows that conventional biofuels will dominate up to 2020, accounting for up to 8.8% of transport fuel use or 24.3 million tonnes of oil equivalent (toe). 15 million toe of this total consumption would additional demand directly driven by the adoption of the 10% target. It is the impact of this additional usage that has been assessed within this report.

Catherine Bowyer, lead author, IEEP: '*This analysis underlines the need to include ILUC in the EU criteria for assessing whether biofuels should count towards the delivery of the renewable energy Directive's targets. The heavy reliance by Member States on conventional biofuel use in 2020 and the limited use of more advanced or energy efficient transport solutions are also a major concern; action by Member States to promote these would put Europe on a more sustainable pathway '*.

The analysis of ILUC impacts is an evolving field and this study applies assumptions based on the best available data sets at the time of drafting[8]. While the figures regarding the scale of ILUC impact may vary between studies, sensitivity tests completed for this assessment show that even when much lower assumptions regarding land use impacts and associated greenhouse gas emissions are adopted, the ILUC impacts are such that biofuels do not deliver emission reductions required under EU law.

Biofuels remain devisive. They are regarded by some as important to achieving lower carbon transport, in particular by replacing future use of fossil fuels in heavy freight and aircraft. However, the green credentials of some conventionally produced biofuels are increasingly under scrutiny, with mounting concerns over their environmental footprint.

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**Notes to the editor**

[1] The Institute for European Environmental Policy is a respected, independent not for profit institute dedicated to advancing an environmentally sustainable Europe through policy analysis, development and dissemination.

[2] Indirect Land Use Change (ILUC) is generated by the elevated demand for agricultural commodities as a consequence of biofuel consumption. In response there will be an expansion of the total area required for growing arable crops, often at the expense of grass or forest. Feedstocks for biofuels are often grown on land that is already arable, however, if total food production is to be maintained this is likely to result in the displacement of food production to new areas. The expansion in the area of cultivation leads to land use change, which is associated with significant GHG emissions as a consequence of the release of carbon locked up in soils and biomass. Moreover the expansion in cultivated area and more intensive use of agricultural land can pose a potentially significant threat to biodiversity globally.

[3] This report was produced independently by IEEP and at the request of ActionAid, BirdLife International, ClientEarth, European Environmental Bureau, FERN, Friends of the Earth Europe, Greenpeace, Transport & Environment and Wetlands International.

[4] The renewable energy Directive (2008/98/EC) sets targets for the delivery of renewable energy ie for 20% of all energy to be from renewable sources and 10% of transport fuels to be from renewable sources by 2020. Following concerns regarding the direct environmental impacts of the Directive it also contains a set of criteria intended to limit the land use change impacts of use of biofuels in transport and bioliquids in heat and power. These require that biofuels used to meet the EU targets must not be grown on certain sensitive lands and that a minimum level of greenhouse gas savings be derived from their use ie 35% reduction from 2011 rising to a 50% reduction in 2017. This only accounts, however, for impacts associated with the direct production of biofuels, it does not account for indirect impacts on land and associated emissions caused by displacement of existing activities to other areas ie ILUC.

[5] This report examined the National Renewable Energy Action Plans (NREAPs) produced by Member States. Required by the renewable energy Directive these set out how each national government plans to meet their 2020 targets and specify in detail their predicted use of biofuels. At the time of drafting 23 NREAPs had been published.

[6] Direct savings of greenhouse gas emissions required under the renewable energy Directive have already been subtracted from this figure; therefore, this represents the emissions anticipated to be additional to continued fossil fuel use up to 2020. The annualised figures take into account deductions over a 20 year period as specified in the renewable energy Directive for land use emissions - this is to take into account

that emissions from land use change represent a one off hit compared to emissions from production that are ongoing.

[7] Advanced biofuels are specified within the Renewable Energy Directive under Article 21.2 as those derived from wastes, residues, non-food cellulosic material, and ligno-cellulosic material and count double towards the delivery of the 2020 transport target

[8] This analysis was based primarily on comparative analysis of modelling results assessing ILUC produced by the Joint Research Centre, the research arm of the European Commission. The results and assumptions were, however, checked by experts in transport policy and against other analysis of ILUC consequences.