

International Scientists and Economists Statement on Biofuels and Land Use

A letter to the European Commission

As scientists and economists involved in the field of climate, energy, and land use, we are writing to you to recommend that policies recognize and account for indirect land use change as a part of the lifecycle analyses of greenhouse gas (GHG) emissions from biofuels. This will encourage development of sustainable, low-carbon fuels that avoid conflict with food production and minimize harmful environmental impacts.

Our comments are relevant to your deliberations on indirect land use change emissions in the context of the Renewable Energy and Fuel Quality Directives. For policies like these to successfully reduce GHG emissions, it is critical to include all major sources of emissions, including those associated with changes in land use.

Peer-reviewed research over the last several years, including studies commissioned by the European Commission, indicates that conventional biofuels can directly or indirectly result in substantial GHG emissions through the conversion of forests and grasslands to croplands or pasture to accommodate biofuel production. Increased demand for crops to make fuel results in higher global commodity prices that can induce farmers in other countries to plow up new ground, including sensitive, high-carbon ecosystems such as tropical forests in South America and Southeast Asia or peatland in Southeast Asia. The conditions for this to occur are not relegated to the future, but are already in place. The Directives do not currently account for these emissions in their lifecycle analysis or elsewhere, giving biofuels credit for greater carbon savings than actually achieved.

There are uncertainties inherent in estimating the magnitude of indirect land use emissions from biofuels, but a policy that implicitly or explicitly assigns a value of zero is clearly not supported by the science. All the studies of land use change indicate that the emissions related to biofuels expansion are significant and can be quite large. Exhaust pipe emissions for biofuels are, by convention, ignored in performing lifecycle GHG emissions analysis for biofuels. This accounting convention is flawed, as was described in the opinion of the European Environment Agency Scientific Committee on 15 September 2011.¹ To justify the omission of exhaust pipe emissions, it is essential to account for changes in land use.

The current scientific understanding is sufficient to warrant immediate action, as has already been recognized in the U.S. federal Renewable Fuel Standard and California Low Carbon Fuels Standard. A regulation based on a robust framework of science can be adjusted as the analysis matures.

¹ <http://www.eea.europa.eu/about-us/governance/scientific-committee/sc-opinions/opinions-on-scientific-issues/sc-opinion-on-greenhouse-gas>

Without addressing land use change, the European Union's target for renewable energy in transport may fail to deliver genuine carbon savings in the real world. It could end up as merely an exercise on paper that promotes widespread deforestation and higher food prices.

It has been suggested that higher GHG thresholds for direct emissions are an adequate substitute for accounting for indirect land use change emissions. However, a problem in the accounting cannot be fixed by changing the threshold. A complete accounting is essential to assuring that promised carbon reductions are credible. Flawed accounting could even encourage greater expansion of biofuels that cause damaging changes in land use, as described in the September 15 EEA Scientific Committee opinion.

Biofuels policies should encourage a growing clean energy market and create jobs producing low carbon biofuels that avoid land use change. Strategic investment decisions must be based upon the best available assessments of the GHG emissions of alternative fuel pathways. Promptly establishing a credible framework that includes indirect land use change will signal the market to invest in biofuels that minimize deforestation and competition with food.

The president of the commission has pledged "a fundamental review of the way EU institutions access and use scientific advice."² We urge you to align the EU biofuels policy with the best scientific knowledge and take into account emissions from indirect changes in land use.

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