

Measuring impact of exports of palm oil biodiesel on direct and indirect land use changes in Malaysia

ABSTRACT

Palm oil biodiesel is often regarded as a renewable energy source with the potential to lower emissions of carbon dioxide (CO₂). However, exports of this product may face non-tariff trade barriers that are directed towards its role in bringing undesirable impacts to the environment. This article examines the impact of exports of palm oil biodiesel for the period 2010-2012 on direct and indirect land use changes in Malaysia. Data from a national economic survey alongside export data of palm oil biodiesel, crude palm oil production and land use for oil palm, rubber, cocoa, paddy and forests are utilised to calculate the extent of direct and indirect land use changes. In 2010, the effect of direct land use changes is recorded to be equal to -0.000156%, increasing to -0.000008% in 2012. For indirect land use changes, the highest effect recorded is for land planted with cocoa which is equal to 0.000292% in 2010, decreasing to 0.000016% in 2012. These results indicate that exports only contribute in a small way towards direct and indirect land use changes.

Keyword: Palm oil biodiesel; Land use changes; Input-output; Exports