

Foreword

This report has been primarily prepared by Martin von Lampe, Agricultural Policy Analyst in the OECD Trade and Agriculture Directorate, but it also contains material provided by other colleagues within and outside this Organisation. This in particular include sections on policy developments (Garry Smith), on science and innovation (Alexandre Bartsev and Iain Gillespie, OECD Directorate for Science, Technology and Innovation), on performance with respect to environmental and other criteria (Paolo Frankl, International Energy Agency, in co-operation with the United Nations Environment Programme and the European Environment Agency), and on environmental effects of agricultural land allocation (Jussi Lankoski). Claude Nenert provided substantial statistical support. Many other colleagues – within the OECD, IEA and externally – have contributed by providing comments on earlier drafts or by editorial, statistical and secretarial assistance.

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Notes

1. IEA: World Energy Outlook (WEO) 2006 and 2007. All these numbers are projected to keep growing, although projected growth rates have been revised downwards in the 2007 edition of the WEO. As the 2007 edition does not provide transport-related emissions specifically, these were estimated using the emissions related to oil use from the 2007 WEO and the share of transport related emission in total oil use related emissions provided in the 2006 edition of the WEO.
2. Total biofuel production has a larger effect: Taking into account all biofuels produced (as opposed to those generated by future support) in North America and the EU (as we look at support in these countries only we exclude Brazilian ethanol here) during the 2013-2017 average, the reduction in GHG emissions would range from 0.9% to 1.8% of their total transport related GHG emissions projected for 2015. Not all of these reductions are caused by support over the decade to come, but result partly from support provided in the past. The values in this footnote are given here for transparency reasons but should not be read in terms of efficiency of support.
3. *Source: Global Subsidies Initiative (2007)*. Updated on the basis of data contained in Koplow (2007).
4. The data provided in the GSI sources include an estimate of the shares of total support vary with biofuel quantities – the projections referred to here extrapolate this part using the projected biofuel quantities as published in OECD (2008a).
5. This extrapolation assumes that current forms of biofuel support remain maintained over the decade to come – as do the market projections presented in OECD (2008a) underlying the present analysis. It should be noted here that with technological advances in both existing and future biofuel chains the required support per unit of output might decline. While lower support would likely reduce biofuel output as well, the per unit support costs of biofuel-related GHG savings and, for that matter, achievement of other policy objectives might be reduced as well.
6. www.co2prices.eu accessed June 2008.
7. If the total biofuel production in those three regions were considered, the above numbers would suggest costs for taxpayers and consumers of between USD 430 and 840 per ton of CO₂-equivalent avoided. These values are given here for transparency reasons but should not be read in terms of efficiency of support.
8. This depends on the fate of the abandoned land and may therefore not be true in all cases.
9. Concawe (2006).
10. Again, total biofuel use in these regions obviously has a larger fuel replacement effect, equivalent to about 1.5% to 2% of medium-term diesel use and 1% to 2.4% of gasoline use in the countries considered.

11. Taking total biofuel use into account, these replacement costs would be lower at USD 0.90 to 2.30 per litre of gasoline equivalent and USD 0.75 to 1.00 per litre of diesel equivalent on average. These values are given here for transparency reasons but should not be read in terms of efficiency of support. Due to the various cross-country effects the different support measures have, a calculation of replacement costs for individual countries is not possible in a meaningful way based on this analysis.
12. USD 0.40 per litre of gasoline and USD 0.60 per litre of diesel if the total biofuel use is considered. These values are given here for transparency reasons but should not be read in terms of efficiency of support.
13. See, for example, OECD (2002).
14. For a discussion in developments in the market structure of bioenergy industries see van Vaals, M. (2007): *Market Structures and International Investments in Bioenergy Markets*. Paper presented at the OECD Workshop on Bioenergy Policy Analysis. Umea, Sweden.
15. See the discussion on biofuel technologies and equipments in Chapter 3 of this report.
16. For information about biofuel programmes in different developing countries see FAO (2007): *Recent Trends in the Law and Policy of Bioenergy Production, Promotion and Use*. FAO Legal Papers Online #69. Rome: September 2007. Accessed in April 2008 from <http://www.fao.org/legal/prs-ol/years/2007/list07.htm>.

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