

Agri-food expansion and climate policy constraints: quantifying the trade-off in Ireland

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Abstract. This paper explores the trade-off between competing objectives of employment creation and climate policy commitments in Irish agriculture. A social accounting matrix (SAM) multiplier model is linked with a partial equilibrium agricultural sector model to simulate the impact of a number of GHG emissions reduction scenarios assuming these are achieved through a constraint on beef production. Limiting the size of the beef sector helps to reduce GHG emissions with a very limited impact on the value of agricultural income at farm level. However, the SAM multiplier analysis shows that there would be significant employment losses in the wider economy. From a policy perspective, a pragmatic approach to GHG emissions reductions in the agriculture sector, which balances opportunities for economic growth in the sector with opportunities to reduce associated GHG emissions, may be required.

Keywords: modelling, social accounting matrix, partial equilibrium, employment, greenhouse gases