

Abstract for “Quantifying CO² Emissions According to the Control-Criterion in a Globalising World”

Maarten Rossum (Statistics Netherlands)

Cor Graveland (Statistics Netherlands)

Sjoerd Schenau (Statistics Netherlands)

Bram Edens (Statistics Netherlands)

Globalisation has all kind of socio-economic effects, but also environmental effects. There are different ways of attributing responsibility for CO² emissions to individual countries. Well-known are the territory based approach which underlies Kyoto Reporting, the production based approach which is followed in the System of Environmental-Economic Accounting (SEEA, UN et al 2012) and the consumption based approaches using environmentally-extended input-output analysis (Peters and Hertwich 2008).

In this report we have explored a new approach to account for responsibility by attributing emissions by the criterion ‘span of control’ or ultimate controlling institute (UCI). Here we include emissions abroad in case the UCI is a Dutch resident company, while we exclude domestic emissions by foreign controlled companies. The main intuition here is that in a globalising world, the controlling units not only are most likely to receive most of the profits, but they also decide on the location of polluting activities.

We find that total CO² emissions of Dutch controlled companies are a lot larger than emissions according to a production approach - as presented in the Dutch air emission accounts – or the territory based Kyoto figures. We also find that in the Dutch economy approximately 62 per cent of all CO² emissions from production are emitted by Dutch controlled enterprises. The other 38 per cent of CO² emissions stemming from Dutch production (SEEA type) are emitted by foreign controlled enterprises active in the Netherlands.