

## **Creating consolidated EU27 Supply-Use and Input-Output Tables, adding environmental extensions (air emissions), and conducting Leontieftype modelling to approximate carbon and other 'footprints' of EU27 consumption for EUROSTAT**

Topic: Organized session: Estimation of the Carbon Footprint for the EU27

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In two projects conducted with DG JRC IPTS on the one hand, and a consortium of TNO, CML, RU Groningen and NTNU on the other hand, EUROSTAT has produced for the first time integrated environmentally extended input output tables (EE IOTs) for the EU27, based on the official ESA95 SUT as well as NAMEAs that EU member states transmit to Eurostat. The initial data set forms a time series between 2000 and 2006. In later stages of the project, data for 2007 and 1995 to 1999 will be added. This paper gives an overview of the overall approach to the project, where other papers in the session will cover specific aspects such as creating country SUT in basic prices and analyses based on the data set. Overall, the project took the following steps:

- For each EU member state, SUT in basic prices had to be estimated with the available SUT (in basic/purchaser prices) and auxiliary data. This work has been performed by IPTS.
- The SUT for the individual Member states had to be aggregated to an EU27 SUT. This work was performed by EUROSTAT with support of IPTS and RUG. The main sub-steps included
  - o For each country, separating the Use table in an Import Use and Domestic Use part;
  - o Further separating the Import use tables in an Intra-EU import Use table and an Extra-EU import Use table.
  - o Aggregating all domestic use, intra-EU import use, and extra EU import use tables;
  - o Confronting and rebalancing the intra-EU import use with the intra EU export supply totals (which in theory should be identical apart from valuation differences, but in practice are not so, due to the fact that these data is reported by different countries and hence may be subject to statistical errors)
  - o Moving differences to the rest of world; neglecting the (now identical) intra- EU import use and intra EU export supply, and creating an aggregated EU SUT by aggregating the individual country Domestic SUT and Extra EU Import Use and Export supply tables.
- To the EU27 SUT, environmental extensions had to be added, and the SUT had to be transformed into an IOT (performed by NTNU)
- On the combined EE IOT, basic modelling was necessary to generate analytical results (most notably creating a Leontief inverse (performed by NTNU))
- Finally the results obtained had to be interpreted (performed by CML and TNO)