Potentials for a circular economy â€" assessment with Exiobase V3

Topic: 514Z Special session: Compilation and Application of EXIOBASE 3 â€" a time series of highly detailed EE MRIOs
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Making our global economy more circular will reduce the need for primary resource extraction, and is hence an important policy agenda in countries and regions such as the EU, China and Japan. One of the unique featurs of the third version of EXIOBASE as developed in the EU FP7 DESIRE project is that it is not only a traditional global MR EE IO, but also shows all economic relations in physical terms. On top of this, for each country waste treatment is represented by a fairly detailed physical SUT/IOT. EXIOBASE V3 further gives time series from 1995 to 2012/13, with now-casted data till 2016.

This detailed insight in physical flows including various forms of waste management allows deriving insight in the following. First, we can analyse the level of re-use and recycling in a specific year across countries. Second, we can analyse changes in the level of re-use and recycling over time. This, in turn, allows by country to assess the amount of final waste output versus primary resources input, which indicates the level of â€˜circularityâ€™ a specific country has arrived at. Further, by analyzing which country has â€˜best in classâ€™ performance, and assessing with which speed countries move towards a more circular economy, educated guesses are possible what levels of circularity can be expected in medium term (e.g. assuming that in 10-15 years all countries will have â€˜best in classâ€™ performance, or assuming an ongoing improvement trend as given by time series analysis.