

Ecological Network Analysis of Sectoral Energy Flows in the EU

Topic: (9.3) Energy Input-Output Modeling (3)

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This paper focuses on recent advancements in the assessment of sectoral energy flows in the EU using input-output analysis and ecological network analysis, and focuses on the current and planned data-collection policies on regional and national level that enable future progress in this direction. More specifically, the paper first elaborates on the methodological compatibility of ecological models and energy input-output models and recent progress made in combining these methods, and focuses specifically on critical methodological issues evolving from whether the analysis is carried out from a monetary or physical perspective. Recent insights in the compatibility of these (Majeau-Bettez, 2016; Tåbben, 2017) are discussed in the context of energy flow assessment. Based on this methodological assessment, data needs and data availability are discussed and are linked with ongoing efforts in statistical institutes on different institutional levels, such as the recent evolutions in the development of physical energy flow accounts (PEFA) on European level (Vandille, 2015; Rachermacher, 2015). The paper contributes to the debate on critical issues in carrying out monetary and physical input-output assessment for energy flows, recent advancements in ecological network analysis applied to input-output tables and links these debates with current institutional efforts and policies on national and regional level.