

The role of intermediate trade in the change of carbon flows in China

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In recent years, evaluating the emissions embodied in trade (EEIT) has become a hot issue in policy and research. Multiregional input-output analysis, which links producers and final consumers, is a favoured method for quantifying the EEIT. However, the role of intermediate trade in driving changes in the EEIT is still not fully understood. Here, we present a framework that separately identifies the drivers of the emissions embodied in trade of final and intermediate products. In a case study, we analyse the changes in CO₂ emissions embodied in interprovincial trade in China from 2007 to 2012, which is driven by rising final demand and offset by decreasing emission intensity and changing interregional dependency. Regionally, the rising imports and final demand in less developed regions (e.g., Hebei and Henan) reduced the emissions outsourced by central coastal regions and drove the flows between central and western regions. The framework can enrich our understanding of the role played by intermediate trade in the relocation of emissions.