

Dissaggregating agricultural water flows in the world

Topic: Environmental Input-Output Analysis

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Water resources are growingly transferred embodied in products internationally traded. These water displacements often involve global inequalities that need to be addressed by setting consumption and production responsibilities. Although Multi-Regional Input Output models are powerful tools to assess the interrelations among countries and sectors in global supply chains, the lack of sufficiently disaggregated sectoral data in the empirical applications may entails a notable drawback for assessing some regional problems. This is particularly important when studying water resources, since agriculture accounts for 70% of water consumption all over the world. Therefore, in this paper we will try to join bilateral trade data on agricultural products with WIOD multiregional tables. This will allow us to analyze water consumption trends and to deepen into different productive specializations that could be triggering the increasing global water consumption happened from 1995 to 2008. Although this process was more intense in developed countries in the past, emerging areas cannot be neglected since their development entails a growing pressure on water resources. By applying a Structural Decomposition Analysis that will divide the sample into groups depending on the level of income of countries, we aim to explain water consumption trajectories on the basis of water intensities variations, changes on domestic or imported technologies and trends in demand patterns. Preliminary results seem to indicate an increase in virtual water trade chiefly due to the great boost of demand during these years. Changes in water intensities would be responsible for a partial moderation of water consumption increase in both high and low income countries. Finally, technological changes in low income nations would boost water consumption.