



A Theoretical Model of Water and Trade

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Water is an essential factor of agricultural production. Agriculture, in turn, is globalized through the trade of food commodities. There is an extensive literature detailing the direct and local relationships between water and agricultural production. Here, we expand upon this important literature to understand how the globalized food economy interacts with water resources. In particular, we seek to understand the following questions: What is the impact of agricultural trade on water resources? How do water resources impact agricultural trade? Thus, we aim to explore the bidirectional feedbacks between water resources and food trade, using a socio-hydrologic framework. To do this, we develop a theoretical model of international trade that explicitly incorporates water resources.