# Article information:

A hybrid multi-regional input-output model of China: Integrating the physical agricultural biomass and food system into the monetary supply chain - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0921344921005905>

# Article summary:

1. A hybrid multi-regional input-output (MRIO) model has been developed to integrate the physical agricultural biomass and food system into the monetary supply chain of China, capturing agri-food product flows at an unprecedented level of detail.

2. The application of this hybrid MRIO model to provincial blue water footprint accounting in 2012 reveals that it enhances both the monetary MRIO table-based approach and the process-based approach from different aspects, reducing uncertainty in modeling due to aggregation of products with different environmental properties into homogeneous sectors.

3. This study fills gaps in understanding economic transactions and associated resource transfers across fine-scale domestic regions in China, providing a more comprehensive physical unit production, trade, and consumption dataset for future sustainable development design.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article presents a hybrid multi-regional input-output model of China that integrates the physical agricultural biomass and food system into the monetary supply chain. The study aims to address the lack of systematic supply-use information of agricultural biomass and food products within China, which makes existing provincial environmental pressure assessments either not detailed enough or not comprehensive enough.

The article provides a detailed description of the methodology used to construct the inter-provincial supply, use, and input-output tables in physical units of 84 agriculture, food, and forestry products. The physical MRIO table of agri-food products is then integrated into the monetary all-sector MRIO table to construct a symmetric hybrid MRIO table of China. The application of this hybrid MRIO model to the case of provincial blue water footprint assessments reveals that it enhances both the monetary MRIO table-based approach and the process-based approach from different aspects.

However, there are some potential biases in this study. Firstly, it focuses only on environmental pressures related to agricultural biomass and food products within China, while ignoring other sectors that may also contribute significantly to environmental pressures. Secondly, it assumes that all provinces in China have similar production processes for agri-food products, which may not be accurate due to regional variations in resource endowments and socioeconomic development patterns.

Moreover, there are some missing points of consideration in this study. For example, it does not consider the impact of climate change on agricultural production and trade patterns in China. It also does not explore counterarguments against its findings or provide evidence for its claims made.

In conclusion, while this study provides valuable insights into the integration of physical agri-food systems with monetary supply chains using a hybrid MRIO model, there are potential biases and missing points of consideration that need to be addressed in future research.

# Topics for further research:

* Climate change impact on agricultural production and trade patterns in China
* Environmental pressures from sectors other than agriculture and food in China
* Regional variations in resource endowments and socioeconomic development patterns in China
* Counterarguments against the findings of the study on hybrid MRIO model in China
* Evidence for the claims made in the study on physical agri-food systems and monetary supply chains in China
* Limitations of provincial environmental pressure assessments in China

# Report location:

<https://www.fullpicture.app/item/31fd1c729f9e0ed14dad270cf56d9c66>