

Identifying regime shifts in the global food trade network: Are there linkages to climate variability?

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Climate change is projected to greatly impact food production systems. Increased trade can be both beneficial and detrimental to the stability of supply: by improving unequal distribution of production, but increasing import dependencies. This analysis typified trade patterns by the presence of major “regime shifts,” defined as the presence of pronounced shifts in net trade balance across countries over time. Regime shifts occurred mostly in the years surrounding 1991, corresponding to the dissolution of the Soviet Union, and are believed to represent a paradigm shift in globalization. Countries that experienced regime shifts showed higher inter-annual variation in yields than self-sufficiency before 1991, implying there may be a relationship between instability of local production systems, and presence of regime shifts. More research is needed to understand the causes and effects of regime shifts, but research suggests that rapid reconfigurations of trade relationships should be considered when planning for climate change adaptations.

Sample of major regime shifts in cereal trade between 1971-2011

