

## **Title: Biomass trade and food import dependency in the corporate food regime**

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### **Extended Abstract:**

There are increasingly more demands on the land system, resulting in an intensified competition between the different biomass uses for food, feed, fibres and as energy carrier replacing fossil fuels. These additional industrial demands for biomass uses have strong impacts on global trade volumes. Biomass, traditionally a resource with a comparably low trade share, is increasingly traded internationally. Proponents of the food regime theory underpin the strategic role of agriculture and food on global commodity markets, and stress that global trade flows of biomass are increasingly flowing from global South to global North, a reversal of flows compared to the second food regime (where flows mainly run from global North to South). Against this backdrop, we have clustered countries by income, food supply, and the role of food trade to identify patterns of food import dependency or high food exports. We compare metabolic patterns of countries that are net-exporters of biomass with net-importers of biomass, discussing these trade patterns regarding their consequences for the vulnerability of national food systems. We argue that the increasing commodification of biomass through global markets is likely to reduce the resilience of some types of national food systems.

### Relevant literature:

- Kastner, T., Erb, K.-H., Haberl, H., 2014. Rapid growth in agricultural trade: effects on global area efficiency and the role of management. *Environ. Res. Lett.* 9, 034015. doi:10.1088/1748-9326/9/3/034015
- McMichael, P., 2013. Historicizing Food Sovereignty: a Food Regime Perspective, in: *Food Sovereignty: A Critical Dialogue*. Presented at the Food Sovereignty: A Critical Dialogue, Yale University.
- Schaffartzik, A., Mayer, A., Gingrich, S., Eisenmenger, N., Loy, C., Krausmann, F., 2014. The global metabolic transition: Regional patterns and trends of global material flows, 1950–2010. *Glob. Environ. Change* 26, 87–97. doi:10.1016/j.gloenvcha.2014.03.013