

Review for Land Systems:

Summary: This perspective paper seeks to draw attention to a gap in the literature linking consumers with land use change. It provides a review of prior studies – focusing on the share of land use change that is driven by international vs. domestic demand and argues that, since the majority is driven by domestic purchases, more emphasis should be placed on characterizing the linkage between domestic consumption and domestic land use change. This requires new data sets on domestic supply chains, linking subnational consumption to subnational land use change.

Major comments:

I like the fact that the authors raise the question: “Why should land system scientists worry about these measures?” I don’t think they spend enough time on this point. Are there documented instances where such measures have given rise to specific policies? I need to be convinced that these measures are important and that bringing the domestic linkages to bear will make a difference. This discussion should also come earlier in the paper.

When it comes to tracing the domestic supply chain, I find myself wondering how meaningful are the bilateral flows? By way of example, when there is a food safety crisis in Arizona, Chicago might simply change its sourcing of lettuce to California. What does this do to the value of the mapping which you are proposing? The international trade linkages are valuable since there is more rigidity in the bilateral trade flows. But I would venture to guess that these linkages are less rigid in well-integrated domestic markets such as the US. This may also be part of the reason why it is difficult to get estimates of domestic trade flows, since they are always changing and products arrive in central distribution centers, only to be repacked and sent elsewhere.

Specific comments:

Figure 1 is a useful summary of prior studies. I do find it to be a bit misleading, as the great majority of the studies place the export share under 40%. Of the two very high shares, both are somewhat eccentric – either using the ‘investment attribution’ (which I don’t quite understand – a footnote would be most helpful), or the ‘marginal’ approach, which is not really marginal – but focuses on a particular period of time. Maybe the authors should avoid comparing ‘apples and oranges’ and focus instead on studies using a common method?

I also like Figure 2, which shows that the object being measured makes some difference, and this can often be explained (e.g., in the case of physical vs. value flows). The effort to understand differences across studies is important and useful.