



Better data is necessary, but not sufficient, to enable sustainable trade

Global economies increasingly depend upon international trade to deliver their goods and services,

with the most recent trade data from the [World Bank](#) illustrating that the value of imports can equate to as much as 175% of some regions' Gross Domestic Product. With this trade, comes the (often) problematic phenomenon of the 'offshoring' of the impacts of consumption. The products that are consumed in one country may frequently have undergone processing steps in other countries, with raw materials sourced from a multitude of international producers. Any impacts along this supply chain are 'hidden' from direct view.

Take the UK's meat sector as an example. In this supply chain, fresh products like poultry and pork are typically reared in the UK, but depend on the production of soybean - used in animal feed - from places like Brazil or Argentina, which might have come into the UK in processed forms via major European hubs such as the [port of Rotterdam in the Netherlands](#).

With distance - and particularly with processing and logistics stages along international supply chains - comes uncertainty and complexity. It's much easier for a UK supermarket to understand the direct environmental impacts associated with a pig reared on one of its farms, than it is for it to understand where the soy used to rear that pig has come from, and what environmental or social impacts that soy production system has had. As a retailer, to understand this, you need to look

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much further along your supply chain. And this disconnect between the drivers of environmental impacts (trade and consumption) and the impacts themselves in regions of production undermines the ability of local actors in places of both production and consumption to shape local and global responses.

At the same time, we are seeing a relative explosion in information

that should - in theory - help to unpack this complexity: data about international trade flows (example [resourcetrade.earth](https://www.resource-trade.org/)); about environmental change in landscapes of production (example [Global Forest Watch](https://www.globalforestwatch.org/)); about the impacts of our consumption overall (example [commodityfootprints.earth](https://www.commodityfootprints.org/)). This new data landscape has been enabled by advancements in computing - allowing large datasets to be processed more quickly and shared more widely (see [Google Earth Engine](https://www.google.com/earth/)) - and remote sensing which now allows an almost real-time understanding of where, for example, emissions are occurring or land use change is happening. Public platforms with freely available data are emerging, which aim to bring together information to shine a light on the responsibilities of the supply chain and of financiers in driving environmental and social impacts (example [trase.earth](https://www.trase.earth/)).

Yet there remains an implementation gap...

Sustainable trade practice lags behind commitments and our understanding (derived from the developing data landscape) of where the problems are and who is connected to them.

One problem to date has been that a collective acknowledgement of the impacts of trade has not been complemented by a standardised or harmonised set of metrics that help us to understand these impacts and their teleconnections. Ten years after the [Aichi targets](https://www.aichi-targets.org/) endorsed the use of the 'ecological footprint' to monitor the overseas impacts of consumption, the incoming [CBD post-2020 monitoring framework outlines the 'material footprint'](https://www.cbd.int/posters/cbd-post-2020-monitoring-framework) in its place; indicative of the relative lack of progress that the international community has made in bringing more powerful and actionable metrics to the fore. Initiatives such as the [Science Based Targets Network](https://www.sciencebasedtargets.org/), [Accountability Framework Initiative](https://www.accountabilityframework.org/), or [guidance for policy makers about how to undertake trade-linked risk assessments](https://www.guidanceforpolicy.com/), provide a mechanism for bridging this gap; synthesising the evidence to provide businesses, policy makers and others with tools to set targets and monitor impacts and risks. But there remains significant confusion in how and what to measure at the supply chain level, and still less consensus about how supply chain metrics might scale to national and international monitoring frameworks. Urgent work is required to ensure alignment across data and measurements across these scales, to allow the effective and coordinated implementation of policy and practice (example [here](https://www.unece.org/)).

And, whilst publicly available data is improving rapidly, informational barriers remain. The public information systems that we have at our disposal to trace and monitor the impacts of trade were often not really designed for this purpose. For example, global customs information is categorised into coding systems which tell us nothing about the environmental credentials (or otherwise) of the materials being moved around the globe. And transparency in supply chains is commonly low. Big trading companies

are starting to [disclose information](#) on their supply chains and associated risks but this only scratches the surface when it comes to the many millions of supply chains that go to make up the global trade system. Legislated risk assessments and disclosure in the form of - for example - upcoming due diligence regulations in some markets are likely to help; but only if complemented by effective monitoring and reporting process and associated data platforms (example [here](#)).

Technical advances such as remote sensing have been fundamental in raising levels of global attention on issues such as trade-linked [deforestation](#). But data technology will not be the answer to monitoring all the adverse side-effects of the global trade system. For example, where human rights abuses and negative social impacts are linked to global supply chains, it's unlikely that 'remotely deployed' technology will be a solution in surfacing and acting upon problems. Whilst [data technologies might be employed to assist](#), if those subjected to these issues do not have the ability to access these technologies or have their voices represented by others then such problems will remain under the technological radar. Here, trade must enable effective local monitoring and governance to respond.

In sum, technological innovation has been fundamental to our understanding of the adverse impacts of trade, and it will undoubtedly be part of the global response to these impacts. Researchers and other providers of information and new technologies need to work hand in hand with data users to make sure that data is understood and actionable and - importantly - complements or enhances the existing data landscape. As data governance is key, supply chain actors and policy makers have a large role to play as 'info-mediaries' who enable information disclosure and support the development of monitoring and assessment frameworks into which these datal solutions can feed (example [Tropical Forest Alliance](#)).

This discussion paper is a part of a series highlighting the insights and findings from ongoing research across the GCRF TRADE Hub. It is intended to encourage dialogue. This discussion paper is led by Chris West (Stockholm Environment Institute - University of York), and if you need to know more please contact chris.west@york.ac.uk.