

Transdisciplinary approaches linking researchers, policy-makers, citizens, and supply chain actors for the sustainability of agricultural commodity supply chains:

Experiences from 'Do Pasto ao Prato' citizen science app in Brazil, cocoa supply chains in Côte d'Ivoire and Ghana, and others.

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Abstract.

The production of agricultural commodities constitutes a key challenge for sustainability, being linked to multiple impacts including tropical deforestation, water pollution, or child labor, and being central for livelihoods of millions of farmers. These challenges thus also entail opportunities for improvement. Agricultural commodity supply chains, which link producers to consumers through multiple intermediaries (traders, processors, retailers) can constitute a key vehicle for sustainability interventions, which can take multiple forms, from private-led certification systems or commitments to due diligence legislation.

Yet, these supply chains are often opaque, with most actors having a very limited visibility on how commodities are produced and where, and how they flow through supply chains. With the Trase initiative (trase.earth), we are working on improving the transparency of supply chains of key agricultural commodities linked to major impacts, by mapping supply chains from the subnational production sites, linking to impacts on the ground, to the consumers and tracing the companies involved in trading these products. Our objectives are to bring transparency in order to identify key places and actors linked to impacts on the ground, monitor progress of sustainability interventions, and support transformative actions.

Because these supply chains mappings require data that are sometimes held by actors themselves, and to ensure uptake of the knowledge and tools generated, this work involves collaborations and outreach with multiple actors and stakeholders including local and international NGOs, supply chain actors such as traders and processors, and public actors.

We will present an overview of our work on different commodities and contexts including soy produced in Brazil, cocoa produced in Côte d'Ivoire and Ghana, and will then focus on one specific initiative, a citizen science project to map domestic livestock products

supply chains in Brazil. Livestock farming is a key part of Brazilian agriculture and identity. At the same time, it is also a major cause of negative social and environmental impacts, including deforestation, fires, food safety problems, and forced labor. One reason why these issues persist is a lack of transparency. The origin and impact of products is hidden from consumers. To tackle this transparency gap, we developed the 'do Pasto ao Prato' app. Launched in August 2021, the app links sanitary inspection labels on beef products with detailed supply chain and geographic data to reveal the origin and risks associated with each product. By recording the shop's location, users of the app contribute to a participatory initiative to improve transparency in meat supply chains.

We will present some of the ways by which we engage with these various actors, and draw insights from these works.