## Biomass Trade and Food Sovereignty in Colombia in the Twenty-Century

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September 30, 2019

The agro-export model prepared during the eighties and unfolded at the early nineties in Colombia, and broadly speaking among the Latin America region, entails intensive external inputs consumption, ecological resources depletion, and breaking up the agrarian social networks at local level. Facing this model an agro-ecological, small-scale, and peasant-based family farming has gained support among the peasant movement, international organizations, and the academy to conciliate peasant agency and sustainable goals in managing agrarian and food systems. These claims joined under a big tent called "food sovereignty".

Although food sovereignty advocates for more sustainable agro-ecological systems to face the neoliberal agro-export model, no works in Economic History or Environmental Studies have dealt with the relationship between the agrarian trade and the capacity of the domestic agrarian sector to provide basic food from a biophysical approach and its changes over time. How has trade affected the productive capacity of the agrarian systems to provide basic foodstuff? How has this relationship evolved throughout the 20th century? I propose to analyse this relationship in Colombia during the Twenty Century by focussing on the biomass flows involved in trade, consumption, and the selfsufficiency capacity of the agrarian sector. I gathered the data from the International Trade Yearbooks, Official Yearbooks, secondary sources, and FAOSTAT database.

The proposal founds on social metabolism and the Material Flow Accounting (MFA) methodology. However, it introduces some changes in the indicators of physical trade balance (PTB) and domestic material consumption (DMC) to make them equivalents

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from a final product approach. In this vein, this work aims to extend the MFA analysis of biomass towards an integrated view of the physical trade and the self-sufficiency capacity. The proposal contributes both methodologically and empirically. First, it unravels the biomass accounting into agrarian metabolism field; and second, it sheds some light on the country's environmental history.

The sensitivity of the series in my proposal validates the methodological changes in MFA. MFA methodology overestimates biomass consumption due to the abundance of pasture in tropical contexts. Regarding the empirical results, the country has moved from being a net exporter of coffee to a net importer of cereals. The rise of extraction has not guaranteed the capacity of the country to produce basic food due to the agrarian system has focused on supplying international markets of tropical products instead of the domestic demand for basic food. I identify a decoupling of the agrarian system from the domestic food demand as of the nineties and changes in biomass and food consumption during the 20th Century, namely the energy transition as of the seventies and nutritional semi-transition as of the late eighties.

The research agenda points to social relations that shape the profile and the direction of the biophysical flows and socio-environmental impacts of tropical specialisation.