Tropentag, September 16-18, 2026, hybrid conference

"Towards multi-functional agro-ecosystems
promoting climate resilient futures"

The hidden costs of food systems in Colombia and Peru

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Abstract

Agri-food systems (AFS) in Colombia and Peru generate substantial economic value but also produce significant environmental and social externalities that remain unpriced and largely invisible to policymakers and market actors. Using the Global Impact Database (GID) and the True Cost Accounting (TCA) framework, this study quantifies the hidden costs embedded across 19 AFS sectors, with a focus on seven major crop sectors. As one of the first cross-country applications of GID data in Latin America, the analysis offers a harmonised and comprehensive assessment of the true costs of food production, processing, and distribution. Our findings indicate that externalities amount to 12 percent of AFS output in Colombia and 13 percent in Peru, revealing a substantial burden not captured by conventional economic indicators. Environmental externalities dominate in both countries, driven primarily by land occupation, climate change impacts, air pollution, and scarce water use. Social externalities, most notably underpayment, child labour, and gender wage disparities, are smaller in aggregate but become markedly more significant within crop sectors, where labour intensity and informality characterise production systems. Livestock, dairy, and bovine meat consistently emerge as the most externality intensive sectors, whereas cereals, rice, sugarcane, oilseeds, and fruits and vegetables exhibit comparatively lower externality shares. A value-chain decomposition shows that most externalities originate at the production stage, though upstream and downstream costs vary by category. These insights highlight clear leverage points for targeted policy and investment—reducing environmental pressures in livestock systems, improving labour conditions in crop sectors, and integrating TCA metrics into national planning and sustainability strategies. Making these hidden costs visible is essential for advancing more sustainable, equitable, and resilient food systems in Colombia and Peru.

Keywords: Agrifood systems, Colombia, environmental impacts, externalities, Peru, social impacts, true cost accounting, value chains

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