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Assessing zero deforestation agreements outcomes in Colombia's beef and dairy and cocoa supply chains

DANIEL ORTIZ¹, BYRON REYES², KAREN CAMILO³, ALEXANDER BURITICA³, AUGUSTO CASTRO³

¹*Queen's University, Canada*

²*The Alliance of Bioversity International & CIAT, Applied Economics, Honduras*

³*The Alliance of Bioversity International & CIAT, Colombia*

Abstract

Zero Deforestation Agreements (ZDAs) are market-oriented, voluntary, and non-legally binding initiatives to reduce deforestation from key agricultural supply chains in forested countries, involving private, public, and civil society actors that promote market opportunities for agricultural commodities while addressing deforestation. These agreements align with the global concerns arising from the Paris Agreement to reduce deforestation and forest degradation to curb greenhouse gas emissions associated with climate change. This study assesses the outcomes of Zero Deforestation Agreements in Colombia, initiatives that have been implemented since 2017 to reduce deforestation across key agricultural supply chains. The analysis is situated in a post-conflict context characterised by accelerated deforestation driven by frontier expansion, land grabbing, and weak enforcement, which poses a challenging setting for voluntary sustainability initiatives. We applied a mixed qualitative and institutional analysis grounded in a theory-of-change framework, drawing on stakeholder interviews, document review, and comparative sectoral analysis to examine governance, coordination, and behavioural outcomes of ZDAs in the beef and dairy, and in the cocoa supply chains. Results show that in high-risk and fragmented sectors such as beef and dairy, ZDAs main contributions have been institutional, including improved coordination, information sharing, learning processes, and emerging norms around deforestation-free production. However, weak traceability, misaligned incentives, and strong frontier dynamics continue to constrain their effectiveness. In contrast, in the cocoa sector, characterised by high organisational coverage and agroforestry-compatible production systems, ZDAs have been more effective in consolidating low-deforestation pathways, reinforcing sustainable production models, and facilitating alignment with emerging international due diligence and traceability requirements. These results highlight that ZDAs function best as governance instruments embedded within broader environmental and agricultural policy frameworks rather than as stand-alone solutions. Their effectiveness depends on complementary regulatory baselines, credible economic incentives, and long-term financial commitments. When matched to sector-specific realities, ZDAs can either remain limited to pilot impacts or consolidate sustainable, deforestation-free production trajectories.

Keywords: Beef and dairy, cocoa, Colombia, outcomes, zero deforestation agreements