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Toward zero deforestation value chains: environmental upgrading and downgrading among non-certified cocoa producers in Colombia

MA. VILLARINO¹, MARIANNE NYLANDSTED LARSEN¹, AUGUSTO CASTRO-NUNEZ², MARY EYENIYEH NGAIWI²

¹*University of Copenhagen, Dept. of Earth Science and Nature Management, Denmark*

²*The Alliance of Bioversity International and CIAT, Colombia*

Abstract

Global pressure to make value chains less damaging to the natural environment, a process known as environment upgrading, has been building in recent years. Most studies that assess environmental upgrading have focused on the compliance of suppliers, which would be farmers in the case of value chains involving agrifood commodities, to sustainability certification standards. Our case study focusing on cocoa producers in Colombia explores an under-investigated topic in environmental upgrading — that of whether sustainable practices of non-certified farmers facilitate zero-deforestation value chains. Using data from 930 randomly sampled households in the Colombian departments of Caqueta and Cesar, we examined the association of non-certified sustainable practices, i.e., processes that benefit the environment which farmers undertake on their own and not because of adherence to sustainability certification criteria, with reforestation and deforestation: A positive association of the practices with the former suggests environmental upgrading, while with the latter would be environmental downgrading, which denotes negative environmental outcomes from the process of environmental upgrading. We also assessed whether or not there are significant differences between mean deforestation and reforestation rates between certified and non-certified cocoa producers in both departments. Based on statistical tests, we found that (a) non-certified sustainable practices can facilitate environmental upgrading and discourage environmental downgrading but only in some cases, and (b) there is no significant difference in mean deforestation rates between certified and non-certified surveyed cocoa producers, but there is a significant difference in mean reforestation rates between the two groups of producers. These results suggest that implementing non-certified sustainable practices poses another way to enable value chain actors to meet the requirements in markets seeking sustainably produced commodities. One such market is that of the European Union, whose legislation on deforestation-free commodities makes certification an optional rather than compulsory process to support the prescribed procedure on diligence procedure.

Keywords: Agroforestry, environmental downgrading, environmental upgrading, sustainable agrifood systems, Sustainable value chains, zero deforestation