

The EU Deforestation Regulation for Cocoa: Impacts on Ghana's Economy and Deforestation

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Introduction

As part of the European Union's (EU) European Green Deal policy framework, the EU is seeking to reduce the global environmental footprint of its citizens' consumption. One specific measure, the EU Deforestation Regulation (EUDR), aims to prevent deforestation and forest degradation associated with the production of seven agricultural commodities responsible for a large proportion of global deforestation, including cocoa. Cocoa is important in this context as it accounts for 28% of total deforestation imported into the EU. Ghana, the world's second largest cocoa producer with 16% of global cocoa bean production, is expected to be significantly affected by this regulation as it currently exports 52% of its cocoa to the EU and accounts for 19% of total EU cocoa imports. The country's cocoa sector is a vital part of its economy, generating significant export earnings and providing a livelihood for around 800,000 farmers. However, Mighty Earth reports that Ghana has lost around a third of its forests since the early 1990s and that deforestation associated with cocoa farming in Ghana remains high, including in protected forests. This study examines the potential impact of the EUDR on the cocoa market and deforestation, with a focus on Ghana.

Background

The EUDR is detailed in Regulation (EU) 2023/1115 and entered into force on June 29th, 2023. It requires that each product – from a set of selected products – produced in, imported into and exported from the EU is (a) deforestation-free, (b) in compliance with the producing country's relevant legislation, (c) covered by a due diligence statement. The EUDR applies to both cocoa beans and all products derived from cocoa, such as chocolate. The EUDR requires importers of cocoa and cocoa products to demonstrate that the cocoa beans used are not linked to deforestation or forest degradation. To do this, importers must provide a due diligence statement covering the entire value chain, starting with the farm plot on which the beans were grown. The importer must use GPS coordinates to prove that the goods did not come from land that was deforested after December 31st, 2020. This includes any all

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conversion of forests to agricultural land, including agricultural plantations and agroforestry systems. The EUDR also requires products to be produced in compliance with the laws of the country of origin, including environmental, labour, and human rights laws. Access to the EU market for non-compliant products will be banned from December 30th, 2025, with a six-month delay for small businesses. The cocoa content of each product must be traceable back to the exact farm plot of origin.

Ghana's cocoa farmers face several challenges, including low yields, low incomes and limited access to inputs and finance. These challenges contribute to the poverty of many cocoa farmers, who are forced to clear forests to sustain their cocoa livelihoods. The EUDR aims to address these issues by requiring companies to ensure that their products are not linked to deforestation or forest degradation and are produced in compliance with national law. The EUDR is expected to lead to profound changes across the entire cocoa supply chain, and for Ghanaian cocoa farmers in particular.

Methods and Data

To analyse the impact of the EUDR on the cocoa market and deforestation in Ghana, we use a framework that links three models. The EUDR divides the cocoa market into two, one for the EUDR-compliant and one for the non-compliant product variants. The EUDR bans all imports of non-compliant variants into the EU. In addition, EUDR compliance increases production costs for farmers, traders and processors. The impact on the global market, taking into account the dramatic shifts in trade flows, with compliant products gravitating towards the EU and non-compliant products towards other regions, is determined by a global, multi-regional partial equilibrium bilateral trade model for cocoa and cocoa products. The policy changes and their impact on the Ghanaian economy, in particular the competition between crops and factor inputs, are captured in detail by a single-country computable general equilibrium (CGE) model. The CGE model adapted for this purpose is the recursive-dynamic DEMETRA model, a derivative of the STAGE CGE model suite. A particular strength of this model for the analysis of smallholder farms is the representation of non-separable household production and consumption through household activities. The Ghana CGE model is calibrated to a 2015 social accounting matrix (SAM) for Ghana which has been modified to distinguish households, factors and household production activities between rural and urban dwellers in 10 regions (20 households in total) and to separate the cocoa processing sector

from other food processing. All cocoa-related data have been updated to reflect cocoa activities in 2015.

The spatial allocation of land use at given input and output prices, taking into account the EUDR rules, is determined by the LUISA4Africa model, an African version of the Europe-centred discrete land-use model LUISA (Land Use-based Integrated Sustainability Assessment). LUISA maximises the utility of land cover in terms of net present value, subject to constraints on available land and the land demanded for each potential use. The utility of land varies by location as described by land suitability maps. For this project, the model has been extended to explicitly include cocoa land in Ghana, treating it as a perennial crop whose yield varies with the age of the plantation according to estimated yield curves. The database is supplemented with current cocoa farm locations and maps of cocoa land suitability.

Using this framework, several scenarios are simulated, making different assumptions about how governments in cocoa producing and consuming countries adapt to the policy change.

Expected Results

Our analysis will provide insights into the EU's potential to reduce deforestation in Ghana through the EUDR and the EU's trade linkages, and how this will affect farmers and farm incomes in Ghana, particularly for cocoa farmers, and the spatial distribution of crops and forests. The results will change depending on assumptions about other consumer country governments who may adopt similar laws to decrease deforestation and producer countries who may support or enforce compliance with the EUDR. The study will also contribute to the broader debate on the impact of trade policy on sustainable development and the environment.