Abstract
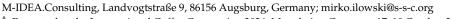
Deforestation Regulation Open Platform (DROP): An AI-Driven Open-Source Platform for Economically Sustainable Coffee Production and European Union Deforestation Regulation (EUDR) Compliance †

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Abstract: The European Union Deforestation Regulation (EUDR) poses significant challenges for the global coffee industry. All the stakeholders involved, from smallholder farmers to global farming, trading and production corporations, are struggling with compliance. Hereby, the Deforestation Regulation Open Platform (DROP), an innovative AI-driven solution designed to address EUDR compliance challenges, is introduced. DROP utilizes artificial intelligence (AI) to manage extensive datasets, including farmer-uploaded images, 3D calculations, maps, ownership data, and export documents. The platform's development involves collaboration with a globally renowned advisory board and employs experts in AI, computer vision, natural language processing, software development, and cybersecurity. DROP's effectiveness will be assessed through its ability to integrate and verify various data sources, detect fraudulent attempts, and provide cost-effective compliance solutions. R&D efforts indicate that DROP will successfully offer a transparent, scalable, and secure alternative to traditional certification processes, effectively verifying EUDR compliance at significantly reduced costs compared to current certification expenses. These aspects of DROP provide a differentiating factor within the global coffee industry. The platform's open-source nature and Linux-inspired business model enable it to provide free and easy access to smallholder farmers, while remaining economically viable, enabled via providing huge cost-savings and efficiency gains for large coffee-related corporations. The conclusion is that DROP represents a promising approach to EUDR compliance, potentially transforming how the coffee industry addresses deforestation regulations, as well as an increase in sustainable operations in general by promoting transparency, reducing costs, and fostering a more equitable and sustainable global coffee sector.

Keywords: coffee; AI; deforestation; climate change impacts; EUDR; sustainability; open source; transparency

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