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Agroforestry in the voluntary carbon market: Global patterns and implications for climate mitigation

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Abstract

The voluntary carbon market (VCM) plays a growing role in mobilising private finance for climate mitigation and carbon removal projects. Beyond carbon sequestration for global climate mitigation, nature-based carbon projects provide multifunctional benefits and are currently still more cost-effective and scalable compared to technology-based carbon projects. This study focuses on agroforestry carbon projects due to their potential to combine food production and carbon sequestration while also potentially enhancing biodiversity and livelihood benefits. However, the contribution of agroforestry projects within the VCM remains poorly understood. This study draws on data from registries of major standards in the VCM to identify and analyses the global distribution and characteristics of agroforestry carbon projects. Results identified a total of 241 project, where 87.6 % of the identified projects are located in Sub-Saharan Africa, South Asia, and Latin America. Only 27.8 % of the projects have issued carbon credits while the rest are still in the pipeline, meaning that there is a high future issuance potential of carbon credits from agroforestry. The highest contribution of credits came from high-value wood agroforestry, followed by coffee, cacao, and fast-growing multipurpose wood and industrial crops. Agroforestry projects in the VCM are associated with multiple Sustainable Development Goals and reflect the potential of aligning climate mitigation efforts with sustainable development objectives. Overall, the findings demonstrate the growing role of agroforestry in the VCM while highlighting the challenges related to transparency, outcome monitoring, and benefit sharing mechanisms involving multiple actors.

Keywords: Agroforestry, carbon credits, climate mitigation, voluntary carbon market

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