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NTFP domestication in agroforestry systems for sustainable multifunctional landscapes at Lake Bosumtwe biosphere reserve, Ghana

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Abstract

The Lake Bosumtwe Biosphere Reserve (LBBR) in Ghana is a mosaic landscape in need of increased tree-cover, combined with a higher ecological diversity in general and an income diversification for local farmers. Despite being one of their main objectives, many biosphere reserves have difficulties to deliver sustainable multifunctional landscapes.

Our project aims to address this by exploring and demonstrating diverse and locally adapted agroforestry options for LBBR, including non-timber forest products (NTFP). These options shall be based on local knowledge and needs and shall have a high potential for value chain development. Specifically, the project aims (1) to understand and evaluate the potential of NTFP integration, including their socio-economic and environmental benefits, and (2) to demonstrate NTFP integration to local farmers and develop concepts for upscaling the approaches to biosphere reserve level. Suitable agroforestry systems for LBBR considering NTFP integration are designed through literature review, adaptation of existing systems to LBBR context, and participatory research with farmers. Based on this, on-farm demonstration plots for NTFP domestication will be established together with local farmers.

We will present first results on the potential of NTFP domestication at LBBR for achieving multifunctional sustainable landscapes. This will be based on a status-quo assessment of NTFP availability, use and cultivation in the study area, using inventories of the four main land use types closed forest, open forest, cocoa farms and other farms. The results will be combined with results from interviews and focus group discussions with farmers as well as a extensive literature review and expert interviews on potential priority species.

Keywords: Agroforestry, biosphere reserves, non-timber forest products domestication

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