



DEVELOPMENT OF A TOOL FOR CALCULATING LAND-USE COSTS AND BENEFITS

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Expert(s)	Country	Volume (md)	Amount (€)	Beneficiary	Funding	Start date	End date	Partner(s)	Reference
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Detailed description of the project	Services provided
<p>In 2013, the European Forest Institute (EFI) and the REDD+ National Commission of Ivory Coast granted SalvaTerra a study on the costs and benefits of REDD+ in Ivory Coast (including carbon and environmental goods and services valuation). The objective was to assess the profitability of the current model of agricultural development, based heavily on deforestation, and to compare it with that of a scenario of agricultural development having less impact on forests (REDD+ scenarios).</p> <p>These REDD+ scenarios were calibrated according to the official production targets in Ivory Coast, while phasing out deforestation for five major agricultural crops (cocoa, palm oil, rubber, rice and yam). This analysis was complemented by a study of the costs and benefits of changing practices in terms of reforestation, sustainable use of wood as energy source and development of cashew plantations.</p> <p>In 2014, as part of the national Rural Development Strategy and the 2012 Law on the sustainable land management in Cameroon, EFI has been working with a coalition of actors to support the land-use planning process, particularly through the development of an interactive mapping platform. This platform is expected to compile available spatial data on land use, the provision of environmental goods and services, the agricultural potential of land, allowing the user to perform multi-criteria analyzes.</p> <p>Based on this work in Côte d'Ivoire and Cameroon, EFI wanted to develop a land-use and land-use change costs and benefits simulator, to inform and facilitate the dialogue of stakeholders in the land-use planning process.</p>	<p>Salvaterra has provided the following services:</p> <ul style="list-style-type: none"> • Identification of current and alternative technical options for five sectors (cocoa, palm oil, rubber, rice and yam), including agroforestry systems. This identification was conducted on the basis of a literature review of technical recommendations for each crop and observations on field realities. It allowed detailing for each technical option the yields obtained over time, costs in money and labor over time, the quantities of fertilizers used (necessary to estimate emissions of greenhouse gases). Standardized operating accounts have been developed to characterize these practices. • Development of a tool (on Excel) to test simultaneously up to five land use scenarios by setting land-use types (forest carbon stocks, yields and distribution into age groups crop by crop, operating accounts, etc.). The results include the costs and benefits, the rate of return of each scenario, the total production and average yield for each product, the evolution of deforestation, emissions/removals and avoidance of GHG emissions, the emissions per production unit, the economic value lost by deforestation, the quantity of labor employed, etc. The estimation of GHG emissions by the simulator follows the latest IPCC recommendations on the matter. • Development of a user guide and a report detailing the structure of the tool to allow its manipulation by other developers. <p>The tool was considered innovative, interactive, sophisticated and adapted by the client, who wishes to develop an online version.</p>