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Thesis Title: Private initiatives at reducing carbon emissions: A case study of the Kariba REDD+ project in Zimbabwe.

Abstract:

Forests arguably have the biggest storage of carbon in the ecological system and offer the greatest opportunity to manage the release of carbon dioxide, one of the greenhouse gases that cause climate change. Reducing Emissions from Deforestation and forest Degradation (REDD+) projects have been initiated at the national level, and mostly covered under the United Nations Framework Convention on Climate Change (UNFCCC) framework involving multilateral organisations like the World Bank, whilst subnational projects like the Kariba REDD+ project are initiated by private players. The research objective was to establish whether Kariba REDD+ as a project has managed to reduce emissions from deforestation. Time series data of Landsat images from 2000 to 2014 were obtained after uploading the Kariba REDD+ project Keyhole Markup Language (KML) shape file into the Global Forest Watch (GFW) platform and analysis tool. The GFW analysis tool uses ground-based estimates of forest biomass and random Forest models to estimate carbon density values over time. Carbon density is estimated as 50% of biomass density values. The GFW offers almost real-time data on carbon emissions from deforestation. In this research, carbon dioxide is used as the unit of measurement to track emissions reductions in the project area comparing it to a Business As Usual (BAU) scenario of no intervention. Also, the research shows how the Forest Transition model holds when Kariba REDD+ Project is taken into consideration. The research result shows that indeed the Kariba REDD+ project has resulted in slowing down the rate of forest loss in the project area when compared with a BAU scenario of no intervention. The main conclusion is that the Kariba REDD+ project has shown to be effective so far in meeting its objective of reducing emissions from deforestation and if the trend continues, it will go a long way in contributing positively to the challenge of climate change. Also it has managed to positively impact the community through some self-help economic activities such as beekeeping, contributed towards the betterment of health through nutritional gardens as well as equipping clinics. The projects proponents, through their international network of players in the carbon markets, have managed to generate positive cash-flows from seeing carbon credits. In total \$USD1.6 million is attributed to have been earned and ploughed back to the community through these various activities. This research contributes to the growing literature on REDD+, in particular in Zimbabwe where academic research on the topic is still in its infancy.