Institute of Production Theory and Resource Economics (Farm Management)

University of Hohenheim

Stuttgart, Germany

Environmental and Socioeconomic Impact Assessment of Peri-urban Land Degradation: A Case Study on the Effects of Sand Winning on Farmlands in the Ga Municipals (Ga West, Ga East, Ga South) of the Greater Accra Region (Ghana)

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Richard Opoku Baah

1st Supervisor: **Prof. Dr. Christian Lippert**

2nd Supervisor: **Prof. Dr. Stephan Dabbert**

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Abstract

Sand winning (also termed sand mining) is an important activity for the infrastructure development of districts in the Greater Accra Region, Ghana. The high demand for sand by the construction industry at the periphery of Accra has resulted in the mining of peri-urban farmlands at an alarming rate. However, crop production underpins the socioeconomic fabric of peri-urban farm households thereby contributing to poverty alleviation in most peri-urban settlements in Ghana. This study herein investigates the socioeconomic and environmental impacts of sand winning on peri-urban farmlands in the Ga Municipals of the Greater Accra Region. A Cost-Benefit Analysis is used to compare the costs and benefits of peri-urban farming and sand winning and to explore the land use decisions of landowners. The environmental and other socioeconomic impacts of sand winning that are beyond the study's Cost-Benefit Analysis model are captured qualitatively. The outcome of the study shows that, the profitability of pineapple production is higher than sand winning whiles the selected crop rotations (based on maize, cassava, and pepper) are profitable over sand winning at low discount rates. However, pineapple production which is mainly for export entails relatively high investment cost which most subsistence farmers cannot afford.