

Environmental and Socio-Economic Impacts of Small-Scale Sand Winning and Quarrying in the Ga West Municipality, Greater Accra Region, Ghana

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ABSTRACT

This study investigated the environmental and socio-economic impacts of small scale sand winning and quarrying in the Ga West municipality, Greater Accra Region. In all, five (5) water and fourteen (14) soil samples were taken from sand winning and quarrying sites for laboratory analysis. One hundred and fifty (150) questionnaires were also administered at the sites and in the surrounding communities. For the soil samples, pH varied from 4.5 – 6.5 (mean 5.8) at sites with active sand winning activities. These samples also had lower organic carbon contents and micronutrients such as nitrogen, phosphorus and potassium compared to similar soil samples from sites of no active sand winning and quarrying activities in the vicinity. Soil samples from sites with no sand winning and quarrying activities had a Ph range from 4.4-6.6(mean 5.9). Values of pH for water samples ranged from 5.1-7.3 and were not within the optimum limits of WHO which are 6.5-8.5. Traces of faecal coliforms were found in the water samples and this might be the cause of some infectious diseases in the municipality.

The study has also revealed various environmental and socioeconomic impacts such as removal of vegetation cover, severe erosion, air, water and noise pollution, floods at sites during the raining season. Stagnant pools of water were frequently observed at the sand winning sites which could serve as breeding grounds for mosquitoes. Data obtained from the District Health Services and analysis of responses from questionnaires suggest prevalence of some endemic diseases such as respiratory tract infections, cholera, malaria, buruli ulcer, eye and skin infections some of which could likely have resulted directly or indirectly from the sand winning activities. Many children of school going age were also involved in sand winning and quarrying and this accounted for the high levels of school drop outs among the youth. Even though the sand winning and quarrying activities provide employment, income or livelihoods for many people, the study recommends that all stakeholders should be educated on environmental, social and economic implications of sand and stone winning

activities so that people should not seek their means of survival at the detriment of the environment and at the cost of social discomfort.

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