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Importance of Geographic Information Systems (GIS) in mapping the spatial distribution, uses and impacts of neglected development minerals: Case studies in some administrative districts near Accra, Ghana

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Information on natural resources available in other parts of the continents in the world is higher as compared to what is in Africa, thus affecting Africa's economic development. Natural resources development are the biggest assets for rapid development of a country especially poor countries like most African countries, there is therefore the need to provide public geological information. In recent times, the public is much concentrated on geological information available for precious minerals such as gold, bauxite and silver etc. but less or no information on neglected development minerals such as industrial minerals; construction materials; dimension stones; and semi-precious stones etc. The neglect of Development Minerals has important implications for sustainable development for a country.

The Neglected development minerals, especially those extensively used as bulk construction materials e.g. sand and quarry stones have for decades helped in the rapid transformation of cities and many metropolitan and urban areas in some developing countries. The phenomenal growth recently in infrastructure such as housing, office complex and road construction have all benefited from extensive exploitation of such minerals which are transported and used in the construction and allied industries from mainly peri-urban and rural communities. Exploitation of these materials undoubtedly provides employment, livelihoods and income to many low-income households and women in particular. In spite of their increasingly socio-economic importance, however, not much research has been done to systematically map and document the spatial distribution of such minerals with exploitation to know their likely effect, over time, on the physical landscape or on the health and safety of people directly engaged in and communities near which these materials are mined.

This project aims primarily to utilize GIS to spatially map the relative distribution and spread in exploitation of sand and quarry stones that are extracted from some administrative districts near Accra. The project will provide relevant data that will be very resourceful for policy planning and implementation, such maximizing the benefits derived from and possible negative impacts on the exploitation and use of neglected development minerals in the urban and metropolitan areas in Ghana and update Ghana's geoscientific data.

