



The Challenges of Sustainable Urban Drainage Management in Ghana

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Abstract

Sustainable urban drainage system plays important role in safeguarding the lives of the people, through provision of drainage management practices and control structures designed to drain surface water in a more sustainable fashion. The purpose of this paper is to discuss the problems and challenges in the current storm drainage management practices in Ghana. It provides solutions for effective and sustainable urban stormwater drainage. There are several drainage problems such as siltation, vegetation growth, encroachment of flood plains by informal settlers, and obstruction of drains by utility lines, which contribute to unsustainable drainage systems. The drainage systems become the recipient of waste of all kinds including faeces and solid waste. The lack of regular drainage maintenance results in vegetation growth and siltation. This situation significantly reduce the capacity of drains and hence the potential to cause flooding. The informal settlement in the flood plains makes it difficult to implement drainage improvement plans. Utility lines (water and telephone lines) lay across drains obstruct flows and trap refuse. There is lack of coordination and capacity of the staff of Municipal Authorities (MAs) for drainage design and construction. The challenges of drainage management in Ghana are the opposition by informal settlers in flood-prone areas to demolitions of buildings in water ways, financial constraint, weak institutional arrangements and political will for land use regulation and regeneration of urban "dead" streams. For sustainable drainage management, the responsibility of drainage should be given to the MAs and transfer staff and funding of the Unit of Hydrological Services Department dedicated to drainage, to the MAs. Apart from central government funding for structural works, each household could be charged drainage fee as part of the property rate. The water quality of streams could be improved by identifying sources of pollution along all streams and enforce treatment prior to discharge into drainage.

Keywords: sustainable urban drainage, urban drainage management, municipal authority

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