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Sustainable stormwater management in Johannesburg's informal settlements

Adegun, Olumuyiwa Bayode

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ABSTRACT

Stormwater management is one of the key components of basic infrastructure in the urban environment. It is important in achieving quality living environments in urban informal settlements. This study considers the social and institutional domains of sustainability in relation to stormwater management interventions in the context of Johannesburg's informal settlements. The study follows a qualitative approach, with two informal settlements in Johannesburg serving as case studies. The two settlements are Slovo Park and Elias Motsoaledi. A total of eighteen interviews were conducted with residents in both settlements, during several field visits, and with officials dealing with informal settlements and stormwater in the city. The study shows the specific challenges facing stormwater management in the settlements; the stormwater management and drainage practices adopted by the residents and the potentials of community-led, NGO-assisted initiatives on stormwater management as part of thrusts intended to catalyse *in-situ* upgrading. It also shows that specific stormwater management interventions by the City of Johannesburg are embedded in the context of formalisation of informal settlements, in other words, township establishment. Interim services provided in almost all settlements rarely touch on stormwater management. This study affirms the importance of meaningful participation in stormwater management interventions and approaches that sustain 'socio-human' capacity for resilience in relation to impacts of runoff in informal settlements. The conclusion shows the benefits of catchment-scale model for stormwater management, the potential of green infrastructure and the necessity for policy transition to sustainable drainage systems.