Dependence of low-cost urban water and sanitation in Sub-Saharan Africa on conjunctive use of groundwater and shallow subsurface- a town city mega-city inter-comparison
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Reducing poverty in many African cities by expanding access to safe water and sanitation depends, in part, upon conjunctive use of the shallow subsurface as both a source of freshwater and receptacle of faecal wastes. We report on situation analyses conducted in a town (Lukhaya, Uganda), city (Kisumu, Kenya), and mega-city (Dakar, Sénégal) under a new 5-year (2015-2020) research and capacity-strengthening consortium (AfriWatSan), that characterise the current physical and policy contexts in which efforts to improve urban access to safe water and sanitation in Sub-Saharan Africa are taking place. In low-income neighbourhoods within each conurbation, access to piped water and sewerage is minimal and the provision of safe water and sanitation is considerably lower than mean statistics reported nationally for urban areas. Further, these neighbourhoods depend upon a range of water sources including unprotected sources for their year-round water supply. Use of on-site sanitation facilities including pit latrines and septic tanks is often constrained by poor drainage and or poor siting in flood-prone areas. A key central finding of these surveys is the continued dependence upon on-site, “closed-loop” water and sanitation systems. Such development pathways are increasingly being recognised formally at a policy level (e.g. Life Cycle Cost Approach) as governments in Sub-Saharan Africa seek to develop sustainable pathways for increasing provision of safe water and sanitation to all.