

## Towards a national policy on wastewater reuse in Kenya

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### **Abstract**

Kenya is a water-scarce country with the capital city, Nairobi, receiving less than 100 l/capita/day. Potable water for irrigation and industrial use is generally unavailable, and this calls for alternative water sources. Despite use of wastewater being illegal in Kenya, it is used to irrigate over 720 ha in Nairobi. In order to justify the formulation of a national policy to support wastewater reuse, secondary data which included the authors' previous work was reviewed. In a study done between 2006 and 2007, the levels of nitrates (100 mg/l) and TDS (630 mg/l) in the wastewater were found to be within the acceptable NEMA standards.

The concentration of lead was 0.1 mg/l while cadmium and chromium were non-detectable. However, levels of BOD and Coliform bacteria were higher than NEMA limits. This implied that Nairobi sewage needed to be treated for the removal of BOD, turbidity and microbial contamination. In order to allow for safe use of wastewater in Kenya, there is need to formulate a national wastewater reuse policy which provides guidelines for maximum allowable levels of pesticides, herbicides, and heavy metals in wastewater reuse. Such a policy should also indicate the required water quality monitoring frequency for faecal indicators (*Escherichia coli*, faecal coliforms, enterococci), and suggest the maximum allowable concentration of nutrients (nitrogen and phosphorus) which may be usually abundant in wastewater.