Katukiza A.Y., Ronteltap M., Niwagaba C., Foppen J.W.A., Kansiime F., Lens P.N.L., 2012. Sustainable sanitation technology options for urban slums. *Biotechnology Advances*. Available online 15 February 2012.

Abstract

Poor sanitation in urban slums results in increased prevalence of diseases and pollution of the environment. Excreta, grey water and solid wastes are the major contributors to the pollution load into the slum environment and pose risk on public health. The high rates of urbanization and population growth, poor accessibility and lack of legal status in urban slums make it difficult to improve their level of sanitation. New approaches may help to achieve the sanitation target of the Millennium Development Goal (MDG) 7; ensuring environmental sustainability. This paper reviews the characteristics of waste streams and the potential treatment processes and technologies that can be adopted and applied in urban slums in a sustainable way. Resource recovery oriented technologies minimise health risks and negative environmental impacts. In particular, there has been increasing recognition of the potential of anaerobic co-digestion for treatment of excreta and organic solid waste for energy recovery as an alternative to composting. Soil and sand filters are suitable for removal of organic matter, pathogens, nutrients and micro-pollutants from grey water.

Keywords: Excreta; Grey water; Sanitation; Slums; Solid waste; Technology