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# An assessment of the potential use of VEI IVF.U grass (vetiveria zizanioides (L.) to clean landfill leachate

Mligo, Luth

University of Dar es Salaam

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**An assessment of the potential use of VEI IVF.U grass (*vetiveria zizanioides* (L.)  
to clean landfill leachate**

**Lath Mligo**

**Master of Integrated Environmental Management**

**University of Dar es Salaam. College of Social Sciences, 2008**

Although many researches have been conducted on the effectiveness of vetiver grass to control soil erosion, treatment of waste waters from municipals, and treatment of landfill leachate from city garbage, there is limited information on how vetiver grass growth responds to landfill leachate during treatment process and their effectiveness in phytoremediation of degraded dumpsites in Tanzania. The present study aimed at assessing the survival of vetiver grass to landfill leachate so as to establish the use of vetiver grass in reclamation of dumpsites in Tanzania. The experiment was conducted using 20 liters plastic containers filled with pebbles that were used as growth media (stationary phase). The leachate from Vingumguti dump was diluted to different percentage concentrations where physicochemical characteristics of the leachate namely pH, salinity and EC were determined at the beginning and at the end of both experiments. The results showed that vetiver grass could grow well when it was exposed to leachate concentration (10-40%) and were able to absorb more heavy metals from the leachate. Above this, growth was reduced and completely died at higher leachate concentration possibly due to salt stress. Since the leachate from Vingumguti dump, is very concentrated and lethal to vetiver grass while in pure form, it must be pre-treated through dilution mechanisms before subjecting it to vetiver grass (a phytoremedia) before releasing it to the Msimbazi River in a least harmful form.