

Evaluation of pollution loading into Msimbazi river by rapid assessment and direct measurement methods

Abstract

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This paper assesses the suitability of Rapid Assessment (RA) methodology as a tool for making an environmental pollution inventory in data poor situation. The W4 method was applied to estimate Biological Oxygen Demand (BOD), nitrogen and phosphorous loading into the Msimbazi River in Dar es Salaam, Tanzania. The Direct Measurement (DM) was done to validate the results obtained from RA. The methodology is based on estimating waste loads from function variables such as production rate, population, etc. and pollution intensities from domestic, industry and agricultural sources. The incorporation of penetration factors for waste loads reduction refines the assessment procedure. The RA results show that domestic source releases 7600, 390 and 3200 tons/year of BOD, Phosphorous and Nitrogen respectively. Industrial activities in the area release BOD loading of 2500 tons/year ...