

**EFFECT OF LUGAZI TOWN COUNCIL ABATTOIR EFFLUENT ON SURFACE
WATER QUALITY IN NKOKO-BUSABAGA STREAM IN BUIKWE DISTRICT,
UGANDA**

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Abstract

The Lugazi Town Council abattoir discharges effluents into the Nkoko-Busabaga stream in Lugazi Town, Buikwe District, Uganda. Nkoko-Busabaga stream which is small is a potential collector of pollutants that could be delivered into larger water bodies depending on the self-purification capacity of the small stream. The study was carried out to assess the effect of the abattoir effluent on the water quality of the stream as well as determine the correlation between discharge and the concentration of parameters during the dry and wet seasons. Field observations and laboratory measurements were carried out to determine the concentration of nutrients and physicochemical parameters in upstream and downstream relative to the point of effluent discharge. The abattoir is not appropriately situated as it is close to human residential dwellings (< 150m). Grey water from the human dwellings joins the abattoir effluent discharge canal. The abattoir effluent is discharged into the stream without pre-treatment. The concentration of parameters (TP, SRP, NH₄-N, NO₃-N, and NO₂-N and BOD) except COD in the effluent were within the National Environment Standards for Discharge of Effluent into Water and on Land. The higher values of COD in effluent are attributed to the grey water. Lack of a control sample outside the study area and time of sampling are major limitations to the study.

Key words: Abattoir effluent; water quality; Lugazi Town Council Abattoir; Nkoko-Busabaga stream; Buikwe; Uganda