# Implementation of Incentivized Waste Management Using Unstructured Supplementary Service Data and Drone Technology

Greenwood Ntabathia
Information and Communication Technology
Mukiria Technical Training Institute
ntabathiagreenwood@gmail.com
Phone Number: 0705998437

## ABSTRACT

Global warming, environmental pollution by waste materials and emergence of pandemics such as COVID-19, are examples of the major convoluted challenges threatening humans, and the entire ecosystem, while posing adverse effects on life in earth. Unfortunately, none of these challenges can be tackled effectively by traditional approaches, -- but rather calls for rigorous technological methodologies if any meaningful success is to be achieved. Kenya is a vocal proponent and key player in developing innovative waste management and environmental conservation mechanisms. That spirit motivated the fundamental idea in this research paper, which focused on harnessing green technology to propel effective waste management and cut down environmental pollution from its root. This paper investigated fusion of USSD codes and drone technology to yield incentivized waste management framework, essentially aimed at handling waste from the point where it is produced rather than waiting until the waste find its way into open drains and all over the environment. This technological approach is tagged with an initiative, "Cutting Waste from the Source-to-Source Bonga Points". The paper mostly used analytical and qualitative research design, and the results showed that the approach of waste management championed in this investigation significantly reduced the amount of waste materials that end up polluting the environment and makes everyone responsible in keeping our environment clean and safe.

**Keywords:** Unstructured Supplementary Service Data (USSD), Drone, Green Technology, Incentivized Waste Management Model