

ABSTRACT

The Sustainable Development Goal number 6 as adopted by the UN is to ensure the availability of and sustainable management of water and sanitation for all. Across the world, an estimated 6 out of 10 people (60%) lack proper sanitation services. It is a fact that the availability of drinking water and hygienic toilets offer sufficient protection from disease which in turn enables societies to be more economically productive. Wastewater engineering-a branch of environmental engineering- whose primary aim is to protect the public health in a manner commensurate with environmental, socio economic and political concerns, should be adopted and practiced widely in developing countries so as to achieve SDG 6. Ugunja is a small market town located along the Kisumu-Busia highway. Whilst doing my attachment in this area, I noticed the prevalent issue of inefficient wastewater disposal methods. This project thus sought to address wastewater management in Ugunja Township by identifying the various methods of disposal and collection available. It also considered the various sources of wastewater so as to highlight the most prevalent one. Legislations and policies regarding wastewater management and environmental concerns were also highlighted. The approach used in this project was investigative research i.e. primary and secondary data. This involved the utilization of socio economic surveys and questionnaires to determine the aforementioned wastewater issues as well as obtaining geographic characteristics of the study area. With such information obtained from the field, then conclusions that are in line with the study objectives were confidently made. The information or data collected was also useful in derivation of sustainable recommendations that are not only cost effective but also mindful of the community, in terms of sanitation and health concerns as well as prevention of environmental degradation.

The study found that there are no clearly defined wastewater disposal and collection methods in the area, compounded by the lack thereof of a sewerage network. Awareness in the community was also high regarding the environmental degradation and health issues posed by careless disposal. The issue of establishment of a sewer network was found to be infeasible due to the high costs that go into such developments. The study concluded that the local community in Ugunja Township have a legal right to proper sanitation methods, the role of education cannot be understated and the link between wastewater and health as well as benefits arising from wastewater reuse.

Recommendations drawn from the study include adoption of modern housing trends, involvement of the government as well as the local community, gender mainstreaming in wastewater management as well as increasing awareness and obtaining other relevant solutions that are sustainable and feasible through benchmarking and brainstorming.