

## Environmental Contamination of Water Bodies by Waste Produced by Slaughterhouses and the Prevalence of Waterborne Diseases in Kumba Municipality

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**Abstract :** This study seeks to examine the nexus between drinking water sources in the Kumba municipality and its related health implications vis-à-vis the recurrent incidences of waterborne diseases such as Typhoid, Cholera, Diarrhea, Dysentery, Hepatitis A and malaria. The study adopted a purposive sampling technique in which surveys were conducted between the months of June to December 2022. 150 questionnaires were retrieved from the 210 administered to the affected population of Kosala, Buea Road and Mambanda. Information for the study was collected using surveys, questionnaires, key informant interviews, the laboratory analysis of collected drinking water samples, the researcher's direct observation as well and hospital reports on the prevalence of waterborne diseases. Water samples from the nearby streams and wells, which were communally used by the local population for drinking, and five slaughterhouses within the affected areas were laboratory tested to determine alterations in their chemical, physical and microbiological characteristics. The collected water samples from all the streams and wells used for drinking were tested for changes in properties such as temperature, turbidity, EC, pH, TDS, TSS, Cl, SO42-, PO43-, NO3-, Fe, Na, BOD, COD, DO, E.coli and total coliform concentration. These results were then compared with the WHO regulations for water quality. The results from the laboratory analysis of drinking water sources, which were at the same time used by the surrounding abattoirs revealed significant alterations in the water quality parameters such as temperature, turbidity, EC, pH, TDS, TSS, Cl, SO42-, PO43-, NO3-, Fe, Na, BOD, COD, DO, E.coli and total coliform concentration. This is due to the channeling of untreated wastes into the different drinking water points as well as the inter-use of dirty utensils such as buckets from slaughterhouses to fetch water from the streams and wells that serve as drinking water sources for the local population. On the human health aspect, the results were later compared with hospital data, and they revealed that the consumption of such contaminated water in the localities of Kosala, Mambanda, and Buea road negatively affected the local population because of the high incidences of Typhoid Cholera, Diarrhea, Dysentery, Hepatitis A and malaria. The poor management of drinking water sources pollutes streams and significantly exposes the local population to lots of waterborne diseases. Efforts should be made to provide clean pipe-borne water to the affected localities of Kumba as well as to ensure the proper management of wastes.

**Keywords :** drinking water, diseases, Kumba, municipality

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