ASSESSMENT OF WATER, SANITATION AND HYGIENE FACILITIES AND PRACTICES IN KUTO MARKET COMPLEX, ABEOKUTA, OGUN STATE

BY

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ABSTRACT

Water, Sanitation and Hygiene (WASH) services in public markets often fail to meet acceptable standard, posing significant public health risks. This study assessed WASH status in the four sections of Kuto Market, Abeokuta [Abattoir (A), Local Market (LM), Ultra-modern Market (UM) and Motor Park (MP)]. It focused on available facilities and vendors' responses on water usage, sanitation and public water quality. A checklist was used to evaluate facility availability, condition, accessibility and compliance with the Joint Monitoring Program (JMP) service ladder designed by the WHO and the UNICEF. Well-structured questionnaires were used to assess socio-demographic characteristics, facility conditions, and WASH practices of vendors. A total of 447 copies of the questionnaire was administered, based on the total number of stores – A (5), LM (357), UM (57) and MP (28). Eleven water samples were collected from seven hand-dug wells, two boreholes at LM and surface water at A and tested for physico-chemical properties using standard methods. Sanitation Standard Index (SSI), Water Quality Index (WQI) and Piper Trilinear Diagram (PTD) were computed. Descriptive and inferential statistics were used to analyze the data collected. Results showed that WASH facilities across the Market Complex did not meet up with JMP standards as 64% of vendors reported inadequate water supply, which was lower than the recommended per capita water usage based on the WHO standards. About 77% acknowledged the presence of toilet facility presence, but only 54% found them readily available, and 44% felt unsafe using them. Estimated daily water usage was 17 L per person, falling below the WHO's per capita water requirement. The results of the SSI revealed that none of the sections met the recommended safe standard (5.0), with scores of 2.1 (A and UM), 2.0 (LM), and 1.95 (MP). The Electrical conductivity and total dissolved solids exceeded the WHO guidelines for two hand-dug wells at

LM. The pH values ranged from 5.98 - 7.78. Alkalinity in one hand-dug well (322 mg/l) and one borehole (211 mg/l) at LM exceeded the WHO permissible threshold. All the samples, except one, from one borehole at the LM had the presence of *Ecsherichia. coli*. Significant differences were observed in pH and temperature ($p < 0.05$) across the locations, while the TDS and EC indicated no significant variation ($p > 0.05$). Among the 11 chemical variables determined, the levels of Mg^{2+}, Na^{+}, SO_4^{2-} and NO_3^{-} varied significantly ($p < 0.05$) across the location. The WQI rated the two boreholes at LM as excellent, and the hand-dug wells at UM and MP, as well as surface water (downstream) at A and three hand-dug wells at LM as poor. The two hand-dug wells and surface water (upstream) at A were good, while groundwater was dominated by sodium chloride across the four sections. The study showed that the status of WASH services was not satisfactory due to inadequate facilities and poor practices in Kuto Market Complex.