

## Urban Waste Management for Health and Well-Being in Lagos, Nigeria

**Authors :** Bolawole F. Ogunbodede, Mokolade Johnson, Adetunji Adejumo

**Abstract :** High population growth rate, reactive infrastructure provision, inability of physical planning to cope with developmental pace are responsible for waste water crisis in the Lagos Metropolis. Septic tank is still the most prevalent waste-water holding system. Unfortunately, there is a dearth of septage treatment infrastructure. Public waste-water treatment system statistics relative to the 23 million people in Lagos State is worrisome. 1.85 billion Cubic meters of wastewater is generated on daily basis and only 5% of the 26 million population is connected to public sewerage system. This is compounded by inadequate budgetary allocation and erratic power supply in the last two decades. This paper explored community participatory waste-water management alternative at Oworonshoki Municipality in Lagos. The study is underpinned by decentralized Waste-water Management systems in built-up areas. The initiative accommodates 5 step waste-water issue including generation, storage, collection, processing and disposal through participatory decision making in two Oworonshoki Community Development Association (CDA) areas. Drone assisted mapping highlighted building footage. Structured interviews and focused group discussion of land lord associations in the CDA areas provided collaborator platform for decision-making. Water stagnation in primary open drainage channels and natural retention ponds in framing wetlands is traceable to frequent of climate change induced tidal influences in recent decades. Rise in water table resulting in septic-tank leakage and water pollution is reported to be responsible for the increase in the water born infirmities documented in primary health centers. This is in addition to unhealthy dumping of solid wastes in the drainage channels. The effect of uncontrolled disposal system renders surface waters and underground water systems unsafe for human and recreational use; destroys biotic life; and poisons the fragile sand barrier-lagoon urban ecosystems. Cluster decentralized system was conceptualized to service 255 households. Stakeholders agreed on public-private partnership initiative for efficient wastewater service delivery.

**Keywords :** health, infrastructure, management, septage, well-being

**Conference Title :** ICABE 2020 : International Conference on Architecture and Building Engineering

**Conference Location :** New York, United States

**Conference Dates :** April 23-24, 2020