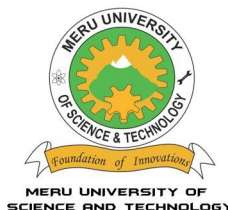




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# The Bare Minimum: satisfaction of Sustainable Development Goal Target 6.2 by sanitation provisions in Institutions of Higher Learning in Tigania West, Meru County

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### ABSTRACT

Separation of human excreta from further contact with the environment has drawn universal attention through the SDGs which approach the provision of safely managed sanitation on SDG 6. Open defecation is the least sanitary option of waste elimination while safely managed sanitation where the waste is contained and treated/disposed is the most sanitary approach. As of 2020 the African population reached 1.3billion with 1.039billion lacking basic sanitation and 208million engaged in open defecation, 27% of the people had safely managed sanitation outside institutions. In Kenya, urban coverage of basic sanitation for 2015 – 2022 was 30% while safely managed sanitation was absent in the same area. Meanwhile, rural cover-

age of safely managed sanitation held at 25% with 2% coverage for basic sanitation. Thus, there was a demand to visualize the status of sanitation in vulnerable communities as the SDG window neared its end. A closed ended structured questionnaire to be self-filled was developed looking to assess the fulfillment of SDG target 6.2 by non-resident student housing and proportionately distributed to all institutions of higher learning in Tigania West targeting only non-resident students. Data analysis was performed by the principal investigator through categorization and comparison against real world statistics and targets as outlined by the Joint Monitoring Program. Findings indicated provisions were mainly shared with hand wash sinks largely missing. Dissatisfaction was higher with adequacy and availability of the sanitation provisions more than access to the provisions. This preempted the unsettling reality that the goals would not be ac-

### Introduction

Hygiene and sanitation as envisioned by the Sustainable Development Goals agenda was to ensure that there was provision of safely managed services to all persons with keen respect to those

who were most vulnerable and suffered in the absence of proper hygiene and sanitation fixtures (WHO & UNICEF., 2017). This was a secondary and late period redress of the dignity inherent to humanity seeing that the Human Rights charter

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already identified these as basic human rights mandatory and inseparable to the collective or individual of mankind.

As of 2020 the continental population of Africa reached 1.3 billion with 1.039 Africans lacking basic sanitation and 208 million actively engaged in open defecation, only 27% of the African people had access to safely managed sanitation outside institutions (WHO & UNICEF, 2020). At the turn of the millennium a promise was made to halve the number of people without access to basic sanitation and 17 years later the SDG's pledged universality (WHO & UNICEF., 2017).

Basic sanitation on the African continent extracted heavy premiums belying the universality of access intended by the SDG pledge. Sanitation in most of the continent was now a status signal and in turn had cannibalized the provision to underprivileged, poor and vulnerable communities against whom it was now levied as a means to an end and not an inherent factor of basic living.

A few years to go before the window shut on achieving these goals, it remained an issue of great import that most of the communities and people who stood to benefit greatly from the fulfillment of the SDG 6 agenda continued to be sidelined, blamed and shamed for wanting sanitation and hygiene beyond what their ill perceived social standing attracted. There was then a demand to visualize the status of sanitation in these vulnerable communities by an intensive valuation of the prevailing conditions of hygiene and sanitation and contrasting them to SDG goals.

The challenges of hygiene and sanitation provision were obvious as laying a great many burdens to these communities. On the other hand, actionable information and metrics for highlighting the invisible yet gigantic gap in goal actualization were not so obvious, being compounded by inadequate data on progress in reaching the desired threshold occurred by a continued failure in reporting or tracking and submission of data.

## Objectives.

The main goal of the study was the tracking of safely managed sanitation provision in non-resident accommodations utilized by students of higher learning institutions in Tigania West. This focused on assessing the compliance of non-resident student housing with the sanitation targets of Sustainable Development Goals Target 6.2 through a process of;

First determining the nature of sanitation provisions in the off-campus accommodation units utilized by non-resident students. Secondly, ranking these sanitation provisions as guided by the Joint Monitoring Program tool; The Sanitation Ladder. And finally with the ranking at hand, judgment was to be made on grounds of whether provisions satisfied the safely managed sanitation target 6.2 of the Sustainable Development Goal agenda.

## Methods

This study was conducted in the non-resident accommodations of higher learning institutions available in Tigania West, Meru County. The institutions were spread over a single geopolitical boundary and possessed student bodies which were heterogynous in their utility of the identified accommodation facilities. This choice of study location resolved the existing challenge of analyzing person to environment interactions presented in preceding studies by offering a more diverse quantity of off-campus neighborhoods from which the study respondents were drawn. The community around the campus represented a valid group of students who lived in private accommodations as tenants and doubled up as a vulnerable group in light of the SDG 6 agenda.

For inclusion to the study; the respondent had to be a non-resident student enrolled at any of the higher learning institutions in Tigania West at the time of instrument administration, the respondent was also required to be in residence within the neighborhoods of the higher learning institutions in Tigania West that were recognized by the school administration as off-campus accommodation facilities for their students.

Sampling begun with cluster sampling which facilitated the isolation of the targeted institutions within the Tigania West area. Simple stratified sampling was then applied to separate them according to non-resident and resident accommodation status. The final step of sampling involved the selection of elements from each of the relevant strata, this was done randomly and dispassionately, fair to all the accommodations carrying non-resident students across the institutions of higher learning. At this stage the project did well to remember the employment of unique residences instead of respondent saturation in regards to the sample size. The exact number of unique residences whose non-resident students participated in this study was kept in check by respecting the proportionate contribution of allied institutions of higher learning to the study population

The study designed a closed ended structured questionnaire to be self-filled and proportionately distributed it to all institutions targeting only non-resident students. The tool featured these sections;

First section focused on content regarding the nature of sanitation as experienced by the non-resident students and was self-reported regarding the state of sanitation provisions and services. It was characterized by MCQ's on pertinent concerns building up the core of sanitation as envisioned by the SDG Target 6.

The second section of the tool featured content evaluating satisfaction with sanitation provision conditions and was characterized by Likert scales that provided the respondent an opportunity to select their extent of agreement or lack of it with a given statement.

*Data analysis* was performed by the principal investigator by aid of google form summary aggregation. The findings were interpreted entirely using Joint Monitoring Program standards for ranking and tracking sanitation goals under the Sustainable Development Goal 6; The Sanitation Ladder and Indicators of SDG 6.2a and 6.2b.

Output from the data analysis was presented

in tables. For the research question dealing with nature of sanitation provisions, the data was analyzed by the matrix of sanitation provision which relies on measures of adequacy, accessibility and availability of the provisions to satisfy the prevailing need. Of which are spoken in the sanitation ladder, national building codes and public health guidelines.

The question and objective regarding ranking on the sanitation ladder was addressed after this fashion, the data collected was referenced against the Sanitation ladder in use by the JMP to bring out the present position of sanitation in these off-campus accommodations as a whole on the scene of monitoring equivalence.

## Findings

All sanitation provisions were present across the population under investigation, except for hand wash sinks which were absent for 50% of the participants. The majority of the respondents shared toilets, baths, and water sources. Among these provisions, toilets were the most commonly shared, while being absent for only a minority of the population.

Respondents who paid higher rents were more likely to have access to certain amenities, such as hand wash sinks, which were found to be absent for 50% of the population. Additionally, it was possible that respondents who paid higher rents were more likely to live in residences with better overall sanitation provisions, as they were able to afford more upscale apartments. On the other hand, it was also possible that respondents who paid lower rents were more likely to live in residences with poor sanitation provisions

The housing unit density distribution was relatively evenly spread across the different density categories, with no single category accounting for a majority of respondents. Household density had a greater impact on the adequacy of access to water points and hand wash facilities, with an inverse relationship between the number of households sharing a provision and the likelihood of suf-

ficient access. Meanwhile, the adequacy of access to baths and toilets was less impacted by household density, with relatively consistent levels of sufficient access across all categories.

The study showed communal sanitation provisions were the most common type of provision available to the respondents and majority of respondents had access to these communal sanitation provisions, with private provisions being less common but still widely used. Public sanitation provisions were relatively uncommon, potentially reflecting wide adoption of communal facilities where private amenities were inaccessible.

A majority of the respondents reported that they shared pit latrines with other households while sharing of pour flush toilets was reported far less. The data showed that pour flush toilets were more likely to be found in communal settings, given that 40% of those who reported sharing a facility had access to a pour flush toilet. Cistern flush toilets were the least common type of facility in the study area. Only 10% of the respondents reported having access to this type of facility.

Private pit latrines were reported by only 20% of the respondents, which is a significantly lower percentage than the 66% of respondents who reported sharing pit latrines. Private facilities shows that cistern flush toilets were the most common type, with 46% of respondents reporting having access to one.

Of the pit latrines provided for sanitation tiled or cemented floors were present in over 90% of the facilities, while wooden/earthen floors were present in only 5%. A third of the facilities (33%) were located near the house, 33% were lit at night, almost half of the facilities (49%) were roofed and (51%) of the facilities were lockable.

The study found students were directly responsible for the hygiene of the majority of the shared sanitation provisions, including hand wash sinks, toilets, bathrooms, and water points and the difference was made up by caretakers and hired laborers. The students were primarily responsible for the cleanliness and maintenance of the sanitation

facilities, regardless of their rental obligations.

The data revealed that 27% of respondents considered water and sanitation as the greatest influencer in selecting an off-campus accommodation in that while rental obligations may have influenced their decisions, the majority of respondents would not compromise on the quality of sanitation amenities. Responses on the likelihood of moving to a residence with poor quality sanitation amenities revealed that the majority of respondents (77%) would not move to a cheaper off-campus residence with poor quality sanitation amenities.

## Discussion

SDG target 6.2a intimates the need to provide adequate, equitable access to sanitation and hygiene for all and ending open defecation with special attention towards the needs of women, girls and those in vulnerable situations (World Health Organization (WHO) & UNICEF., 2017)

To realize it the proportion of population with access to safely managed sanitation had to be concurrent with the established minimum. According to this study, the population was using a variety of provisions with the greatest at limited sanitation which is well below the threshold of safely managed sanitation set as the desirable goal of target 6.2a and one step away from open defecation.

The non-resident students enrolled in all the higher institutions of higher learning in Tigrania west were cumulatively provided with provisions of sanitation that after an investigative expenditure were of a degree inadequate to their needs and incoherent with the global agenda on sanitation. In monitoring and evaluation of SDG progress within the study population this finding sure incriminated the sanitation providers, provisions and users with varying levels of acidity.

First, the sanitation providers; landlords, owners of the rented spaces of accommodation provided subpar approaches to sanitation manage-

ment which were approved by authorities before construction. This showed a loose fit between the executions of sanitation policies in Kenya, the global goals of public health carried under sanitation development with their implementation.

This gap in communicating appropriate sanitation implementation to the sanitation users by sanitation stakeholders held true in the instance mentioned and was being mitigated by shrewd landlords who went out of their way to source and install 'modern' sanitation fixtures on demand - with the promise of hefty returns as a result of providing this premium service, disregard for best practice notwithstanding. The gap led to the extortion of non-resident students by owners of accommodations that provided sanitation provisions marginally respecting the edicts of the code and policies. These had now become beacons and drivers of profit rather than basic installations of habitability and damned were those who could not pay for the privilege of in-house hand wash sinks and flushing cisterns.

Pricing out a population or a segment of a population from innately and perhaps divinely apportioned dignity by playing fast and loose with the policies governing provisions brings to mind the crimes against humanity red flags. The premiums placed on safely managed sanitation have had sanitation erroneously come to be perceived as high end privilege. It robbed from the real meat of the matter which was this; sanitation provisions were important beyond premiums and tenure, far from vanity and status signaling because they are divine defaults, human rights. All living facilities, non-resident or resident deserved these facilities just as enshrined in both local and international policy, law and goals for public health and no justification could be made for why they were being provided after a price point or why they were absent in the first place.

## Conclusions

A wide selection and compositions for sanitation provisions of a nature most trustworthy were

found in the study area beginning from single user cistern flush toilets to the pit latrine, containment had been either septic tanks or pit latrines. This would have made wonderful reporting only if these sanitation provisions were not being over-shared, making their reliability questionable and shelf life a game of chance.

The non-resident student bodies; which in this study signified the vulnerable populations of SDG 6 faced indiscriminate exploitation in the pursuit for proper accommodation as viewed through the sanitation lens. The radicalization of sanitation as a potent agent for boosting returns from residential development investments befouled the greater purpose of sanitation provision as determined by extant policies.

The disregard for policy and regulation cumulatively led to the students' accommodations having provisions that were not at par with both the SDG 6.2 targets and national regulatory framework standards. Institutions did not account for the development they caused, proliferation of non-resident accommodations went unchecked, sanitation and habitability minimums were glossed over and residences were occupied in a state unfit for safe sanitation management.

## Recommendations

Separating sanitation provision from conflation with sanitation services. The acknowledgement of dichotomy between the two terms will clear up the confusion existing in minds of policy makers and legislations around sanitation that for long have conflated the two. The separation will allow for shedding of masks and less victim blaming and an obvious but reluctant admission that indeed the two were never the same.

Isolating sanitation provision from rental-residency access. Gold standard sanitation provisioning should be approached in the same way public health through building construction approaches the allocation of windows and damp proofing of buildings; primal basics, a bare minimum and universally conventional.

Narrowing the scope of sanitation inspection at the ward level through use of sensitive public health tools. The study recommends the amendment of public health sanitation inspection tools used in local ward level assessments to capture relevant and commonly overlooked sanitation data. Present tools are too broad and limit themselves to whether toilets are present or not; a travesty, something a self-respecting monitoring and evaluation professional would convulse upon sighting.

Providing sanitation technologies and extension officers to oversee the refurbishment of existing provisions and future development of SDG 6 compliant sanitation provisions. This is a gap between old school sanitation and emerging sanitation complexities that must be bridged before the entire bloc of sanitation drifts apart into the obscurity of settled science. It involves a return to beauty honor and valuation of work for what it is; imaging God. The stigma around sanitation workers, sanitation work and sanitation value chain exploitation towards unhealthy ends must be checked in doing this. The technologies abound and can be adopted for all contexts, all that remains is a lifting of the veil that shrouds sanitation occupations in filth and degeneracy.

Requiring accountability for sanitation fitness of satellite developments from the core drivers of the development. In this case, higher learning institutions are to be held directly responsible for the status of sanitation provisions in the accommodations springing up around them to accommodate the surplus student population they enrolled, by corporate greed or by corporeal complacency.

Restricting institutions of higher learning from taking on student populations beyond their capacity to provide unquestionable sanitation befitting the top brass populating their boards, senates and high stations. The self-same injunction limiting the number of students that can be accommodated in school based accommodations should be reviewed to reflect this. If need be, let

the higher institutions appropriate these peripheral non-resident residences and guarantee the sanitation provision fitness is at par with global standards before subletting them to the students.

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