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SUSTAINABLE DEVELOPMENT AND MULTISECTORAL APPROACHES

Sanitation challenges in learning institutions: The case of Nakuru Municipality, Kenya

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While every aspect of human development is vital, perhaps none is as important as the provision and access to improved sustainable sanitation. Whereas, the learning institutions are at the heart of transforming the nation and must sensitize and enrich the minds of the citizens, most schools' sanitation facilities has been found wanting. Since the introduction of free primary education in Kenya in 2003, school enrolment has risen to about 7.3 million. In 2008, free secondary education was introduced raising significantly enrolments in secondary schools. These efforts may not realize their ultimate goal-meeting the MDGs. School's sanitation and hygiene have received the least attention in the allocations of monetary resources. Against this background, this research sought to establish and report on the actual status of the schools' sanitation facilities, hygiene standards and behaviour in the schools within the peri-urban areas of Nakuru Municipality. Findings would in turn inform existing NGOs such as ROSA which aims at promoting resource-oriented sanitation concepts being an innovative, affordable, adaptable and replicable approach to sustainable sanitation.

Introduction and background

Kenya covers an area of approximately 582,311 square kilometers and is divided into eight provinces. It borders Ethiopia to the North, Sudan to the Northwest, Uganda to the West, Tanzania to the South and Somalia in the East. Out of the major towns, Nakuru a cosmopolitan town is the fourth largest town in Kenya (ROSA, 2007). Located 160 km North West of the Capital City of Nairobi, Nakuru lies at an altitude of 1859 metres above sea level and gained its Municipal status in 1952. The town covers an area of 290 km^2; Lake Nakuru National Park taking up to 188 km^2 leaving only 102 km^2 to the town. The town has fifteen wards, each with an elected councilor. The wards can be categorized into: low-income areas with high population densities; high income areas with low population densities, and middle income areas with medium population densities. On average Nakuru town receives rainfall of 800-900 mm per annum. Until 1985, Nakuru town was adequately served with water. In the recent past however, the supply of water has continued to reduce. The town gets its water from both surface and underground water sources ROSA (2007). The main actor involved in water and sanitation provision in Nakuru is the Nakuru Water and Sanitation Services Company Limited (NAWASSCO).

Poverty levels and population density

According to The Daily Nation Wednesday, (2008), Kenya's population is currently estimated at 36,000,000 and it is expected to hit the 38,000,000 mark in 2010. The current population in Nakuru Municipality is estimated at 500,000 persons. A key indicator of welfare and by extension poverty is the unavailability of basic services such as sanitation, water and solid waste collection. In Nakuru, schools in high income housing areas enjoy adequate and reliable sanitation in addition to adequate water supply. In the middle income areas, garbage collection and water supply is done although irregularly.

Garbage management to a large extent is via burning as these schools can't afford and are not willing to pay for costs of service rendered. In the low income areas, provision of water and sanitation is very unreliable and inadequate. This can be attributed to increased enrollments in the learning institutions. Since the introduction of free primary education in 2003, national primary school enrollment has risen to

about 7.3 million from 5.9 million pupils in 2002. In 2008, free secondary education was also introduced raising significantly enrollments in secondary schools. The physical structures of the schools largely depend on whether the schools are in high, medium or low income areas. This study focused on low income areas and the results showed that the schools' structures are largely semi-permanent. Only a few schools had permanent structures which had been constructed through the government's initiative of Constituency Development Fund (CDF). Despite, expansion of physical infrastructure has not been given much attention to match the increased number of students. Indeed school sanitation and hygiene have received the least attention in the allocations of free education monetary grants and other resources.

Sanitation, hygiene and health related statistics

Sanitation provision in Kenya is currently in the dockets of Ministries of Public Health and Sanitation and Local Government. The latter is responsible for centralized systems while the Ministry of Public Health and Sanitation is in charge of on-site sanitation. Water and sanitation related diseases have been and continue to be the highest causes of morbidity within Nakuru Municipality. Only 13 km^2 of the approximately 240 km^2 functional area of Nakuru town is served by sewerage network. The remaining area is served by pit latrines and cess pools/septic tanks (MCN, 1999; Otieno, 2005). According to Kihumba (2007), for on-site treatment like pit latrines and cesspits in residential areas, the preferred method of dealing with excreta disposal is by abandonment of the pit latrines, burying the waste and moving to a new location within the plot. The situation is no different in the learning institutions. The study found out that one of the schools had a line of filled up and buried pit latrines. The school lacks space to construct any more pit latrines.

Table 1. Reported water-sanitation related diseases in Nakuru Town

Year	Diarrhoea	Intestinal worms	Skin diseases	Typhoid
2005	15,138	4771	9541	1223
2006	17,414	6582	12,584	905

Source: Public Health Resource Centre, MOH office, Nakuru (2007).

Water supply, frequency and consumption

According to NAWASSCO there are four categories of water consumers within the municipality. For this paper we shall only highlight the first category within which schools fall i.e. domestic users composed of household users, government organizations and public institutions. The users in this category are estimated to consume approximately 11% of total water supplied. The water reticulation system is inadequate with only 34 km^2 (34%) of the municipality being covered. Water supply is mainly by rationing and the frequency is skewed. The impact of rationing significantly affects provision of adequate sanitation in the learning institutions for they lack adequate storage facilities.

Data and data analysis

The data was collected from 120 students of the participating schools (primary and secondary). In primary level the informants were chosen from class 4-8 while in the secondary schools, the students were from across the forms. All the informants were requested to provide background information on their sex, age, safe sanitation behaviour and to state the status of the school's sanitation facility. They were asked to write down this information and submit it to their respective class representatives who could in turn hand it over after a day to the researcher. A total of 20 schools within the municipality were selected purposefully for analysis. Interviews, questionnaires as well as observation were used to get the data. 90% of the informants explained that the sanitation situation in their schools was deplorable and needed urgent attention.

Existing sanitation facilities

From the observation carried out, 80% of the schools had pit latrines also known as "drop and forget". 15% had pit latrines and flush toilets while 5% only had flush toilets also known as "flush and discharge. Though this was encouraging as the institutions had waste disposal facilities, all these facilities were found highly wanting. Although most facilities either wholly or partially, appeared to have doors, most

were falling apart while others had no doors at all. It also emerged that in the 15% of schools with pit latrines and flush toilets, 90% of the students preferred the pit latrines to the flush toilets. Reason behind this was that most of these schools experience water shortages and hence the flush toilets are a mess especially after early mornings *"I would rather get late by queuing for the pit latrine than get into that flush toilet. It is awful and I feel like throwing up every time I visit it"* one respondent said. This only left the researchers guessing of the sanitation situation of the schools in the 5% category. Though the majority preferred the pit latrines, the 10% had their reasons for choosing the flush toilet. The pit latrines were found to be lacking well fitting doors thus denying the students the privacy needed. They were also not regularly cleaned, roofs were leaking and some had collapsing walls that posed risk to the students. The students also feared from the reported cases of pit latrines that had sunk into the ground due Nakuru's geological formation. In schools where the authors encountered girls especially in primary mixed schools, 89% of the girls said they miss school during their menstrual periods. Probed, they attributed their absence from the fact that the toilets do not offer the much needed privacy. The doors as found out are detached and the boys' block is next if not together with the girls' block.

Number of toilets in comparison to the number of students

99% of the respondents confirmed to the inadequacy of the sanitation facility. In one case, authors had respondents from a school that had only 8 toilets (4 for boys and 4 for girls) with a population of 800 students. This translates to 1: 100. This is in contrast of the guidelines of 1: 25 for girls and 1: 30 for boys. The recommendations are surpassed by at least a common factor of 3. This led to students to waste more time during short breaks. As observed, most schools allow a short break of 10 minutes which is basically insufficient for the students to relieve themselves. This may also explain the high incidences of improper use reported. 98% of the students reported that they had to queue for at least 6 minutes. This is 60% of the break time leaving the pupil/student with little time.

Washing hands

87% of the informants confirmed that they do not wash their hands. They even do not bother as one respondent clearly did put it. On the other hand, from observation, 92% of the schools had no hand washing facilities. The 8% that had the washing facilities, the facilities were a distance away from the sanitation facility. Of the 8%, three quarters did not have water. This beats the purpose of having the washing facility. The research found out that where primary and day secondary schools provide lunch, pupils/students ate without first washing their hands. This was partly due to ignorance and to a large extent lack of hand washing facilities.

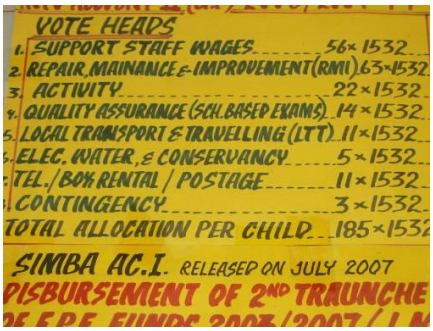
It was found out that there is no clear cut sanitation and hygiene course/lesson. The students thus took a lax attitude as compared to the other issues affecting humanity. A good case at hand is the HIV/AIDS. Most students confirmed to be abreast with the information on how to stay safe including practicing safe sex. Contrary was the case for sanitation and hygiene. While we can equate washing hands with soap to practicing safe sex, more emphasis is on the latter than the former whereas the magnitude of the effects is almost similar.

On what is used to wash hands, 98% washed their hands using plain water while only 2% uses soap. As found out most sanitation facilities lacked the hand washing facility. Where it exists, it is either none operation or quite far thus beating the purpose of the facility. None of the involved schools do provide soap for the students there by contributing to the high percentage of students who do not wash their hands. However, 97% of the students said that they would wash their hands if operational hand washing facilities were to be provided.

Table 2. Tabularised findings of most schools' sanitation facilities			
Parameter	**Yes (%)**	**No (%)**	**No response**
Separate toilet for male and female in case of mixed schools	5	92	3
Hand washing after visiting toilet	12	87	1
Hand washing facility	8	92	-
Hand washing facility located far away from the sanitation facility	96	2	2
Presence of any hand washing detergent	2	98	-
Adequate (in terms of number) sanitation facilities	1	99	-
Properly used and maintained	4	92	4

Photograph 1. Existing sanitation facility
Source: Gacheiya & Mutua. (2008)

Photograph 2. Note the stagnant urine
Source : Gacheiya & Mutua (2008)



Photograph 3. Distribution of finances
Source: Gacheiya & Mutua (2008)

Photograph 4. Notable is the falling of door
Source: Gacheiya & Mutua (2008)

Conclusion and recommendations

The goal of this paper was to identify the status of the sanitation facilities in the education institutions in Nakuru, Kenya. By analysing data collected from the students, it emerged that there is need to upgrade the sanitation situation in the schools. School toilets are often dirty and unfriendly; lacking essential items such as soap, anal cleansing materials and sometimes water. According to the Ministry of Public Health and Sanitation, out of 34 million Kenyans, 15.64 million (46%), do not have adequate sanitation. Whereas the same ministry recommends a ratio of a minimum of 1 toilet to 25 girls and 1 toilet to 30 boys, the situation on the ground was found to be different. Sanitation in schools is wanting due to various reasons

such as: high enrollments; inadequate and unbalanced provision of monetary funds for different votes from the government; hygiene is not emphasized and teachers are not sensitized on sanitation whereas the pupils' hygiene practices are hazardous. Other factors may include uninformed planning and designs, poor management and maintenance of existing facilities and inadequate water supply.

This paper proposes equal investment in terms of software and hardware if schools' sanitation and hygiene is to be improved. There needs to be deliberate but informed expansion of the social amenities in the schools matched with advocacy, awareness raising and education initiatives in the field of water, sanitation and hygiene. There is an urgent need for the Ministry of Education and the Ministry of Public Health and Sanitation to work together to ensure a workable and realistic sanitation and hygiene syllabus. Further that the allocation of monetary resources to schools reflect the need for adequate sanitation facilities to match the increased enrollments. These two ministries need to deliberately increase monetary allocations for the provision of sanitation and hygiene. Increased collaborations between the learning institutions need to be encouraged. For schools in Nakuru, Egerton University- Engineering department can be consulted on designs of sanitation facilities.

In the promotion of hygiene and sanitation, there needs to be a pragmatic shift of focus to schools and pupils/students, as it is recognized that schools offer an important point of entry for raising the profile of hygiene and sanitation of the human race. These young men and women properly trained and educated, can be effective change agents for behavioural practices such as washing hands, using latrines and maintaining hygienic environments. Further, it is the authors' contention that success will always be elusive unless and until those leading in the campaign understand and incorporate the youth when dealing with water and sanitation issues. Thus, it is recommended that youth language be used in the discussions, awareness creation fora in schools, literature, posters and drama. It is all the humanity needs to attain the millennium development goals.

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Keywords

Sustainable sanitation, ROSA, peri-urban, hygiene, settlement structures

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