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The Neglected 3rd Pillar of Sustainable Urbanization: Exploring Social Sustainability of Homa Bay Town, Kenya

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Abstract:
Though the concept of sustainable development originally included a clear social mandate, for two decades this human dimension has been neglected amidst abbreviated references to sustainability that have focused on bio-physical environmental issues, or been subsumed within a discourse that conflated 'development' and 'economic growth'. However social sustainability is increasingly finding prominence as an important theme of sustainable urbanization. Its relevance to sustainable urbanization of emerging urban areas in developing nations with financial constraints is particularly important. The promulgation of 2010 constitution in Kenya created devolved units called counties. These counties have their administrative headquarters located in rapidly urbanising towns which are steadily growing and expanding at unprecedented rate as centres of commerce, education, religion, culture, socialization and administrative hubs. Scientifically gathered information on social sustainability of these towns remain scanty, fragmented and anecdotal. These paper reports findings of a study that involved 453 residents and used a descriptive survey design based on mixed methods of inquiry to examine the social sustainability of Homa Bay town based on selected social sustainability indicators. The findings show disparities in key social sustainability indicators and reports potential risks if proper urban planning is not undertaken. The study recommends greater public participation in urban governance and proposesan integrated planning.

Keywords: *Sustainability, social sustainability, urbanization, sustainable urbanization*

1. Urbanisation in the Context of Social Sustainability

A vision for cities has never been more important than it is today. More than half of the world's inhabitants live in cities and this migration trend is expected to continue. By 2050 more than two-thirds of the world will be urban dwellers (Global View, 2015).Cities are the foundation of modern civilization; they are the engine room of economic growth and the centers of culture, entertainment, innovation, education, knowledge, and political power (Roberts and Kanaley, 2006). It is projected that if current trends continue, between 2000 and 2030 urban land cover is expected to triple, while urban populations are expected to nearly double. Most of the growth is expected to happen in small and medium-sized cities, not in megacities (Elmqvist *et al*, 2013). By 2050, 7 in 10 people will live in urban areas. Every year, the world's urban population increases by approximately 60 million people. Before 2020, more than half of the total population in developing countries is expected to be living in cities and towns (UN, 2011). By the end of the current decade its urban population will have increased by 50% and the total number of urban dwellers in 2040 is expected to be five times that of 2010. It follows, therefore, that Eastern Africa will face huge challenges associated with massive urban population increases; monumental new and additional demands for the provision of adequate and affordable housing and urban services; and, perhaps most importantly, urban based income-generation opportunities. Kenya is one of the countries that will have to accommodate 38.1 million new urban dwellers by 2050(UN-Habitat, 2014). Mounting evidence indicates that rapid urbanization, especially in developing countries like Kenya, calls for major changes in the way in which urban development is designed and managed, as well as substantial increases of public and private investments in urban infrastructure and services (Department of Economic and Social Affairs (2013).

Yet, while cities are incubators of innovation and help foster increased employment and economic growth, rapid urbanization has brought with it enormous challenges that greatly impact on their social sustainability, including inadequate housing, increased air pollution, and lack of access to basic services and infrastructure (United Nations, 2017). Therefore, it

will be under the auspices of cities where we will succeed or fail in achieving our goals of poverty eradication, equality, climate change reduction, and ensuring healthy lives. It will be the cities that determine if we achieve inclusive economic growth or yield to greater inequality. It is in cities where people will seek opportunities for higher education and employment. And, it will be cities that determine if we will continue our steadily increasing usage of the world's resources or if we can realize a more sustainable path (Global View, 2015).

Urban areas are the scene of highly complex socio-environmental developments and critical sites of the necessary transformations to sustainability. They are the locus of economic expansion and employment opportunities; provider of resources and knowledge useful to improve social wellbeing and reduce poverty; prime mover of cultural and social changes. Despite the associated benefits they concentrate poverty, social inequality, and environmental degradation. How urban areas are designed, managed and used is likely to shift substantially based on demands created by two powerful trends. One trend involves a growing awareness of a threat to the sustainability of the Earth's natural environment; the second is the rapid urbanization. Combined, these trends call for massive development of new buildings and infrastructure, along with new social and cultural institutions, to accommodate vast numbers of city dwellers without irreparably harming the natural environment (Annissa *et al*, 2011).

2. Social Sustainability in Perspective

Though the concept of sustainable development originally included a clear social mandate, for two decades this human dimension has been neglected amidst abbreviated references to sustainability that have focused on bio-physical environmental issues, or been subsumed within a discourse that conflated 'development' and 'economic growth'. The widespread failure of this approach to generate meaningful change has led to renewed interest in the concept of 'social sustainability' and aspects thereof (Vallance *et al.,* 2011). In deed as Lehtonen (2004) has rightfully argued the social dimension has commonly been recognised as the weakest 'pillar' of sustainable development, notably when it comes to its analytical and theoretical underpinnings. While increasing attention has lately been paid to social sustainability, the interaction between the 'environmental' and the 'social' still remains a largely uncharted terrain.Social sustainability is one of the pillars of sustainable development. It may not have enjoyed equal status in terms of rigor of analysis and discussion in urban discourses but, times are fast changing and there is increasing attention towards social sustainability—its definition, principles, indicators and status of achievement in cities. Within the three-pillar sustainability discourse that has emerged over the past 25 years, social sustainability has been the least examined pillar. However, over the past 10 years there has been a growing adoption of social sustainability as an independent concept (Davidson, 2010). It has been further observed that it is emerging as an increasingly important theme (Turkington and Sangster, 2006; Valance *et al*, 2011). It is the contention of Wood craft *et al* (2011) that among the three ubiquitously quoted dimensions of sustainability, priorities have been given to environment and economic sustainability while social sustainability according to Manzi *et al*, (2010) have been largely neglected. This view is shared by 2000 (Ghahramanpouri *et al,* 2013), who has indicated that among the three stated pillars, social aspect of sustainability is the least studied and, only has been seriously considered after the year 2000.

A growing body of evidence now points to increased interest in social sustainability. Saffron (2012) for instance opine that over the past decade, social sustainability has emerged as a field of research, policy and practice. A diverse set of stakeholders are currently involved in initiatives to apply social sustainability as a planning practice with a particular focus on the social outcomes of urban development, housing and regeneration. Previous research on sustainability has been mostly limited to environmental and economic concerns. However, social sustainability has begun to attract interest among scholars, receiving also political and institutional endorsement as part of the sustainable communities' agenda and the urban sustainability discourse (Colantonio, 2013). Prior to this, Saffron *et al.* (2012) have indicated that social sustainability was largely neglected in mainstream sustainability debates with much priority, focus and attention given to economic and environmental sustainability in particular in the context of planning, housing and communities, where policy and investment has focused on renewable resources, low carbon communities and encouraging pro-environmental behaviour in households. As a result, they have argued and rightfully so, that there are few practical resources that directly address the question of how to create places that are socially sustainable, as well as physical infrastructure that is environmentally sustainable.

Given the little attention that social sustainability has received in the discourses even its very definition has been less than definite. According to Polese and Stren (2000) for social sustainability to be realized:

> "Urban policies conducive to social sustainability must, among other things, seek to bring people together, to weave the various parts of the city in a cohesive whole, and to increase accessibility (spatial and otherwise) to public services and employment, within the framework, ideally, of a local governance structure which is democratic, efficient and equitable."

Enyedi (2013) has further traced the genesis and need for social sustainability to forces within the urban set up itself. He argues that urbanisation leads to serious social conflicts, which, in turn, may lead to the disintegration of local societies, to the exclusion of certain social groups from urban society. Social sustainability thus he concludes is a relatively balanced socio-economic development, where the fruits of development are shared by all social groups without others being undermined by social disintegration. Additionally, Colantonio and Dixon (2009) considers social sustainability as concerning how individuals, communities and societies live with each other and set out to achieve the objectives of development models which they have

chosen for themselves, also taking into account the physical boundaries of their places and planet earth as a whole. Perhaps Polese and Stren (2000) have the most comprehensive definitions of social sustainability: -

> Development (and/or growth) that is compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population.

Regardless of the diversity of the definitions, Sachs (1999) has argued that strong definition of social sustainability must rest on the basic values of equity and democracy, the latter meant as the effective appropriation of all human rights – political, civil, economic, social and cultural – by all people. According to Rafieian and Mirzakhalili (2014), social sustainability components are placed in three central groups. The first group of the components is happiness and quality of life. This group of components is related to revenue of households, poverty, income distribution, unemployment, education and conditions of life and health and security. The second category of the components relates to the equality of facilities for all categories of society and the third group includes social cohesion. The main components of social sustainability are basic needs, individual capacity and social capacity. Individual capabilities are linked to education, skills, health, values and leadership whilst community capabilities stem from relationships, networks and norms facilitating collective action.

The study reviewed a number of social indicators of sustainability subsequently discussed. A wider consensus on a common definition may be missing, but the aspects that constitutes social sustainability are generally universal. Therefore, the definition of a socially sustainable urban settlement will still be as diverse as much as the variety of researchers and urban scholars. Yitfacheck and Hedgecock (1993) defines it as,''a city is marked by vitality, solidarity and a common sense of place among its residents. Such a city is also characterized by a lack of overt or violent intergroup conflict, conspicuous spatial segregation, or chronic political instability.'' Perhaps much elaborate definition of social sustainability is the one given by McKenzie (2004) that describes social sustainability as, "a positive condition marked by a strong sense of social cohesion, and equity of access to key services (including health, education, transport, housing and recreation). Social sustainability occurs when the formal and informal processes, systems, structures and relationships actively support the capacity of current and future generations to create healthy and liveable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life."

In their argument the Berkeley Group (2013: 4) has more avid description of social sustainability Social sustainability is about people's quality of life, now and in the future. It describes the extent to which a neighbourhood supports individual and collective well-being. Social sustainability combines design of the physical environment with a focus on how the people who live in and use a space relate to each other and function as a community. It is enhanced by development which provides the right infrastructure to support a strong social and cultural life, opportunities for people to get involved, and scope for the place and the community to evolve. It so appears in diverse literature sources that while a built consensus on definition of social sustainability is elusive, the components that constitute social sustainability is largely agreed upon. Some of the key indicators that keep appearing consistently are health, education, transport, housing and recreation as well as equity between generations (Saffron *et al*, 2012; Mak and Peacock, 2011). Republic of Canada (2012) considers a socially sustainable city as one which allows residents to meet basic needs as illustrated in Figure 1.

Figure 1: Areas of Social Sustainability
Source: Republic of Canada, 2012

Such needs include food, shelter, education, work, income, recreation and safe living and working conditions; is equitable; maintains or enhances the physical, mental and social wellbeing of the population; preserves the cultural and biological heritage, and thus strengthens the sense of connectedness, promotes mutual respect, with people living together

harmoniously and in mutual support of each other; is democratic – promoting citizen participation and involvement; and is liveable, linking the form of the city's public places and city dwellers' social, emotional and physical well-being. A diagrammatic illustration of a socially sustainable city is indicated in Figure 1. This study makes no attempt at creating a universal definition, but it relies upon a mix of definitions to study the various indicators of social sustainability in Homa Bay Town which is the subject of key findings.

3. Study Area

Homa Bay town is situated on latitude 3400 46'E and longitude 0000 40'S and it covers an area of 29 km^2 out of which 9 km^2 falls within the Central Business District (CBD) while the rest consists of peri-urban settlements. It is along the North-Eastern part of Lake Victoria, 105 kilometres South of Kisumu City and 405 kilometres southwest of Nairobi. The total area of the Town is about 197 km^2, of which Lake Victoria covers about 97 km^2 The town has several residential estates, the most populous being Sophia, Shauri Yako and Makongeni. The township is divided into six local government administrative wards, namely Market, Posta-Bonde, Katuma, Kanyabala, Kanyadier-Kothidha and Kanyango-Kalanya. As per 2012 projections, Homa Bay Town hosts 41,844 people representing about 50 per cent of the total urban population. Homa Bay Town which had population density of 567 persons per km^2 in 2012 is the densest. The population projection by Kenya National Bureau of statistics has placed the total population for Homa Bay Town as at 2015 to be 105,079 with a population density of 567/Km2 (County Government of Homa Bay, 2013). Homa Bay is primarily an administrative centre with small-scale trading as the dominant economic activity. Notably is the trade in fish, especially near the fish-processing factory, whereby fish is brought to the town by fishing boats from elsewhere. The three low-income settlements in the municipality are Makongeni on the northern side of the Town and Shauri Yako and Sofia on the southern side. Water and sanitation services in the municipality are provided by the South Nyanza Water and Sanitation Company (SNWASCO), while sewerage services are still under the Municipal Council of Homa Bay (Foeken and Owuor, 2012).

Homa Bay Town has an intricate hybrid ribbon urban form. Development is mainly located along transport routes such as the roads to Kendu-Bay, Rodi and Mbita. The town has few skyscrapers and a number of single-floor buildings. The informal settlements are mushrooming along the lake shore given the fact that the residents of such settlements work along in the shoreline as fishermen. The informal settlements are characterized by dilapidated buildings made of iron sheets such as in Sofia, Makongeni and Shauri Yako. The transport networks are, on the other hand, configured with the topography, avoiding the low-lying valleys and hills. The result is a series of meandering sections of roads with the attendant developments. The Map 1 shows these areas. Topographically, The Town has a gently rolling terrain that flattens towards Lake Victoria. It is characterized by various hills standing separately; significantly noticeable are Makongeni hills, Got Rabuor Hill and Asego Hill. Most parts of the town drain westwards to the lake except the areas of Got Rabuor, Arujo and parts of Sofia, which drain into the Arujo stream which eventually drains into Lake Victoria (County Government of Homa Bay, 2013). The Town is underlain by various rock types, namely, agglomerates, conglomerates, tuff sandstone, granite and other deposits which are useful in the construction industry. The soil is black cotton soil, which is difficult to work upon with simple hand implements and will easily collapse if not reinforced for construction infrastructures such buildings and latrines. Map 1 shows the location of the study area.

4. Socio Demographic Characteristics of Respondents

	Male (%)	**Female (%)**	**Total (%)**
Duration of stay in Town			
1-10 years	71.2	78.1	74.65
11-20 Years	19.7	16.7	18.20
21-30 yrs.	7.0	3.8	5.40
>30 yrs.	2.2	1.4	1.80
Age (yrs.)			
0-18	1.3	3.7	2.50
25-35	25.0	28.6	26.80
36-60	49.6	50.7	50.15
>60	24.1	17.1	20.60
Marital Status			
Not married	14.6	7.3	10.95
Divorced	0.0	1.4	0.70
Separated	0.9	1.8	1.35
Widowed	0.4	4.6	2.50
Married	58.4	64.4	61.40

	Male (%)	Female (%)	Total (%)
Single	25.8	20.5	23.15
Education Level			
Lower Primary	7.7	8.7	8.20
Upper Primary	16.7	22.8	19.75
O-level Secondary	33.8	33.3	33.55
University Education	29.1	28.8	28.95
Postgraduate	12.8	6.4	9.60
Employment Status			
Regular gainful employment	24.4	16.9	20.65
Informal Sector	42.7	40.2	41.45
Unemployed	32.9	42.9	37.90
Income Levels (Ksh)			
0-5000	33.8	42.9	38.35
5001-10000	41.0	36.1	38.55
10001-50000	23.1	20.1	21.60
>50000	2.1	0.9	1.50
ALL	234	219	453

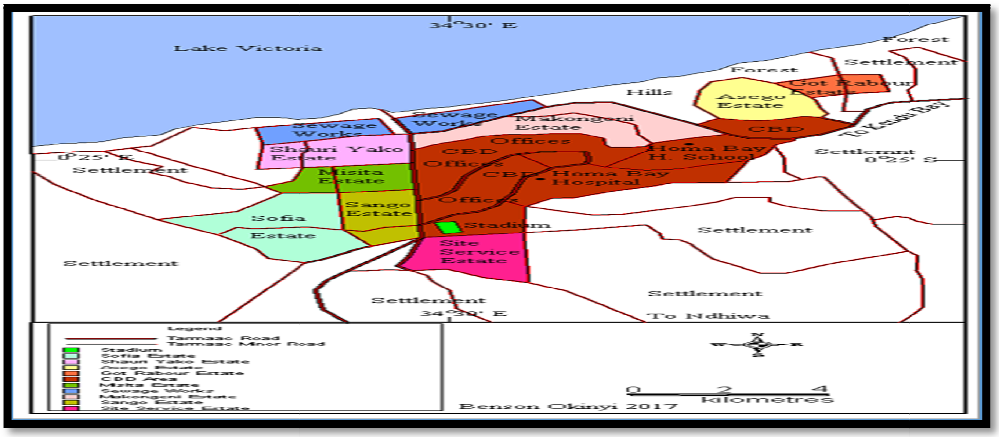
Table 1: Socio-Demographic Characteristics of the Study Respondents
Source: Authors' survey

The study respondents were drawn from primarily urban residents. In overall, 74.6% of the respondents had been living in the town for a period ranging between one year and ten years. Less than 2% had lived in the town for more than 30 years while 5.4% had lived in the town for a period between 21-30 years.

In regard to age, majority (50.15%) were aged between 36-60 years. Only 20.60% of the respondents were aged over 60 years. The youths aged between 25-35 years comprised 26.80% of the respondents. As far as their marital status was concerned, 10.95% were not married, 0.70% were divorced, 1.35% were separated, 2.50% were widowed and majority (61.40%) were married. A further 23.15% were single as at the time of the study.

In reference to their education levels, 8.2% had lower primary education as the highest level attained, 19.75% had upper primary level of education, 33.55% had)-level of education, 28.95% had university level of education while 9.60% had acquired post graduate level of education.

As regards their occupational status, 20.65% had a regular gainful employment, 41.45% were employed in the informal sector, and 37.90% were unemployed. Their income levels varied with 38.35% having monthly incomes of between 0-5000, 38.55% earning between 5001-10,000 shillings, 21.60% netting between 10001and 50000 while only 1.5% earned above 50,000 Kenya shillings. These variations are reported in Table 1.



Map 1: Map of the Study Area
Source: Author

5. Methodology

The study was based on a descriptive survey design utilising mixed method and involving 453 respondents—234 (51.7%) male and 219 (48.3%) female residents randomly drawn from nine major residential estates in Homa Bay town. The mixed methods approach was adopted given its increased recognition for its strength and adequacy and ability to enhanceinternal validity and reliability of results (Schneider *et al*., 2012; Landsverk, *et al*., 2012; Palinkas *et al*., 2011 and Aggarwal, 2008). The residential estates were clustered together into high and low income residential areas and systematic random sampling used to identify individual households whose heads were interviewed. A structured survey questionnaire was administered to the household head. The questions were tested for internal validity using the alpha Cronbach test which returned results of alpha coefficient of 0.724—0.868 which were established to be within the range of an alpha of .65 to .80 that by convention is often considered an "adequate" scale in human dimensions research (Vaske, 2008; George and Mallery (2003).

In tandem, qualitative inquiry was undertaken and involved administration of key informant interviews to 14 key informants that were purposively identified based on their roles as the Town Managers or involvement with town residents. Quantitative data from the study was subjected to quantitative analysis using SPSS V 20 and descriptive statistics including frequency counts, percentage, mean, standard deviation was used for analysis and interpretation of data. In addition, statistical tests like Correlation coefficients was used for hypothesis testing and 0.05 level of probabilities was used as the basis for exploring relationship between the concerned variables throughout the study. The Pearson Correlation test allowed investigation of the strength of the relationship between two continuous variables and showed if there was be a positive or negative linear relationship. Qualitative data from key informants was transcribed, coded and analysed using thematic/content analysis and examined for trends, associations and patterns. The verbatim citations and anecdotes have been incorporated in the discussions to corroborate the findings obtained in the survey questionnaire. For this study, a significance level of 0.05 has been used. This means that the results of the hypothesis tests (used in regression, t-test and ANOVA) are less than 5% likely to have occurred by chance. Necessary tables and categories was used to classify the data considering their nature and distribution.

6. Key Findings

6.1. Education

Study showed that the educational facilities available in the town were inadequate to meet the needs of present residents. Only 35.4% believed they were adequate while 64.6% were of the view that the facilities do not meet the present needs and have no capacity to meet future needs of the town. A statistically significant difference was reported by gender (P=0.00≤0.05) with more female (59.4%) compared to 40.6% male indicating in the affirmative that the educational facilities in the town were adequate now and in the future. In the same way a statistically significant difference (P=0.01≤0.05) was reported by residential estates as seen in Table 1. Besides those there were no statistically significant differences observed by education level, income levels, marital status or the age cohorts.

Residential Estate	Adequate (%)	Not Adequate (%)	(%)
Makongeni	29.2	70.8	100.0
Got Rabuor	26.3	73.7	100.0
Asego Hill	55.6	44.4	100.0
Sofia	40.4	59.6	100.0
Shauri Yako	39.6	60.4	100.0
Migita	44.0	56.0	100.0
Site and services	23.0	77.0	100.0
Junction		100.0	100.0
Sango/Mbuni	53.3	46.7	100.0
Totals	35.4	64.6	100.0

Table 2: Percentage Respondents by Estate on Adequacy Of Educational Facilities in Homa Bay Town
Source: Author

6.2. Health

The study also examined the adequacy of health facilities to meet the needs of the present and the future generations. The findings showed that only 34.7% believed the facilities were adequate compared to 65.3% who indicated a contrary opinion. A statistically significant difference was observed by gender (P=0.05≤0.05). Of those who believed the facilities were adequate, 28.6% were male while 41.1% were female showing a higher confidence among female than male on the adequacy of the health services. There were no observed statistically significant differences by age, education level, residential estate or income levels.

6.3. Social Cohesion

The study sought to determine the social cohesion between the various communities staying in the Town. Specifically, the residents were asked if in the six months that preceded the study someone in the residential estate where they lived made them feel unwanted or discriminated either because of your ethnicity or social status. The results showed that 30.7% have felt discriminated in the past six months compared to 69.3% who have not. A statistically significant variation (P=0.05≤0.05) was reported by gender with more female (30.7%) compared to 24.8% of the male feeling discriminated in their estates of residence. Further a statistically significant difference (P=0.00≤0.05) was reported by estate of residence.

There were also reported differences by levels of income of the residential areas (P=0.01) that showed that among the low income residential areas, 34.5% felt discriminated in the last six months preceding the study compared to 18.1% of those in the high income residential areas thus indicating there is more reported cases of discrimination in low income estates than high income residential estates. An exception however is Got Rabuor estate which despite being classified as high-income area had high discrimination. The explanation for this is because of the heterogeneous nature of the estate with its blend of high and low-income earners. Besides gender, income levels, residential area and level of education there were no other observed differences. There was observed statistically significant difference by level of education (P=0.00) variations shown in Figure 2.

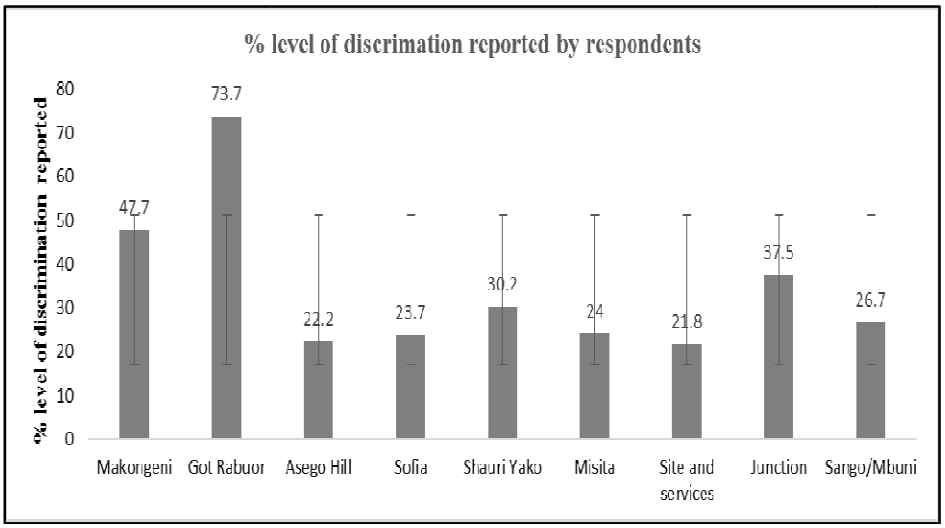


Figure 2: Level of Social Discrimination Reported By Respondents
Source: Author

6.4. Community Connectedness

Homa Bay Town is multi-ethnic cosmopolitan town even though it has a predominantly Luo community. Other ethnic tribes in the town include neighbouring Kisii and Luhya communities. A majority of the Kikuyu community was affected during the post-election violence and tensions of 2007 and that has usually replicated subsequent elections. A sense of connectedness is requisite for social sustainability. The study sought to establish how the residents g*et al*ong with members of the other ethnic communities in their neighbourhood. The results showed that 83.7% g*et al*ong well with no significant differences by gender. There were however statistically significant differences by residential estate (P=0.03). It was established that 28.1% of residents in the low-income estate of Shauri Yako were not getting along well and so do 20% of the residents in Makongeni. There were also significant differences by level of education (P=0.05) with more persons with low level of education 19.1% compared to high level of education 12% reportedly not getting along well with members of the other ethnic communities. A significant difference (P=0.01) was also reported by age groups with 45.5% of those in the age group of 0-18 years not getting along well compared to 12.6% of those aged 36-60 years. The trend showed that more young persons did not g*et al*ong well with other members of the ethnic community compared to the adults which posits a great challenge in the event of tensions since the youths are most likely to be involved in violent activities from the past experiences in the Town according to one of the key informants interviewed.

> "…It is a big problem; drug abuse is common among school going (secondary) children especially use of bhang. Prostitution has gone high with the increased migration of people into the town. Tertiary colleges such as Kenya Medical Training College (KMTC) and Maseno University have contributed to cultural erosion in the town. Crime has been a problem and it is becoming more. Youth are unemployed and lazy to work hence engage in criminal activities. The negative behaviours if not controlled will lead to insecurity in the town. Increased crime among youth who use drugs has created mistrust among people of different tribes…" Manager in the Office of the Women Representative

6.5. Involvement in Communal Activities and Services

The study identified six key services that are considered important for social sustainability and these included accesses to play grounds, library services, arts activities and venues, museums, open spaces and parks and children playing grounds. The respondents were asked their level of satisfaction with the services and they reported responses in the Likert scale of extremely, very, moderately, slightly and not at all. The responses Extremely, Very and moderately were recoded as "satisfied" while slightly and not at all were recorded as "dissatisfied." The findings showed that in overall 86.9% were dissatisfied while only 13.1% were satisfied with the services. There were no statistically significant differences by gender. There were significant variations in each of the individual elements for instance 57.05% of the respondents were satisfied with sports and leisure but for the rest of the cases, the satisfaction levels were less than average. The findings are summarised in Figure 3.

A significant level of satisfaction (P=0.010) was reported by levels of education with more persons that have reached lower primary (27%) expressing satisfaction with other higher levels of education having less than 20% satisfaction indicating the disapproval rate was higher among persons with higher levels of education. Interviews with the key informant brought out these disparities. The Town has one playing ground owned by the county government. There is virtually no designated open spaces and parks many of which have been converted into buildings. The town has no designated halls for socio-cultural events and no library services. There are no open children playing grounds apart from open spaces in primary and secondary schools. There is a children's park outside Tourist Hotel but it is in a poor state. The only available open space is the Rose Muhando grounds that was almost taken by a private developer, residents had to protest to prevent it from being annexed. The deplorable state of social facilities in the town was corroborated during key informant interviews.

There is no library in the town which is accessible to the public. Stadium which can be used for art and sporting activities is currently in a pathetic state, a complete eyesore. The children playing ground are only found in schools where they learn. They are not in good condition or safe for playing either. Some have long grass. Children lack playing grounds in estates where they live and no museum that holds the cultural artefacts and history of the town is in place. —Manager, Homa Bay Children's home

Similar views were shared with the County probation officer who indicated that many residents are unaware of existence of a public library in the County Assembly offices. He also observed that there are no children playing grounds in most of the residential estates.

There are no library services owned by the National Government but there is one which is found in County Assembly Offices though many people do not know of its existence. In addition, there are no playing grounds in the estate. Schools have playing grounds which are children friendly. There is no museum in the town. —County probation Officer

In her own perspective, the Manager office of the women representative termed the situation as "*deplorable and pathetic*' indicating that the children's park is neglected and the stadium has been turned into a dumping site.

The current state is deplorable and pathetic, there is a children's park outside Tourist Hotel but it is dysfunctional, completely neglected, bushy and unattended. There used to be a library at the District Commissioner's offices but it was then rendered useless and turned into an office after the coming of the devolved government. The stadium for sporting activities is in a very bad state and it has been turned into a dumping site of garbage and wastes. There is one library at the county assembly which is not open to the public and many are unaware it exists. Awiti Jamawego grounds which is an open space for relaxing has been turned into grazing field for cows and no one cares. —Manager Office of the Women Representative

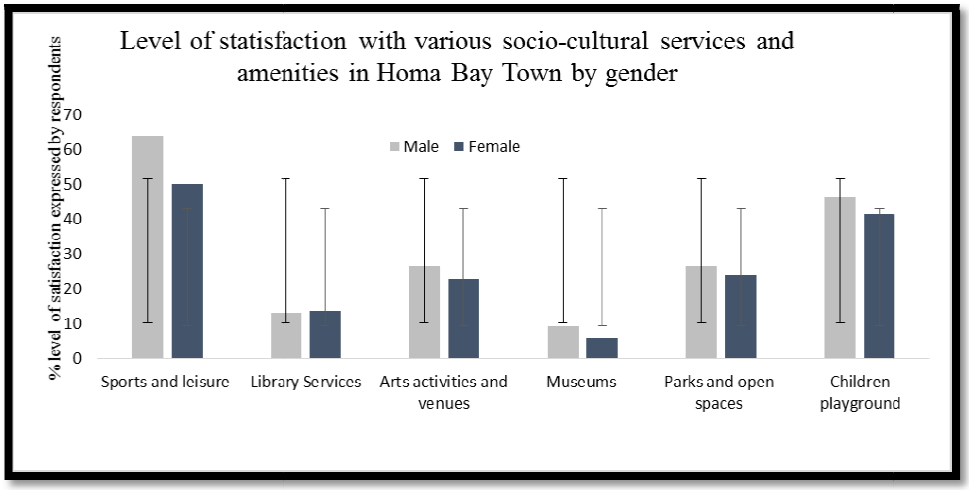


Figure 3: Level of Satisfaction with Various Socio-Cultural Services and Amenities in Homa Bay Town

Figure 1: The Gates of Neglected Children's Park in Homa Bay Town Adjacent to Tourist Hotel
Source: Author

UN Habitat has described the poor state of recreational facilities in Homa Bay Town that reflects closely on the findings of this study.

The land that was set aside for recreation was grabbed. All the estate playing-grounds within the municipality have also been grabbed leaving the children with no playing-grounds except in school compounds. The available recreational facilities (bars and restaurants) only cater for adults while neglecting activities and fun days that can be attended by the whole family. Initially families used to visit the beach but now the lake is covered by water hyacinth. Alternative places where they can take their families for fun day is to other urban centres such as Sare-Awendo, Isebania, Rongo and Kisii **(**UN Habitat, 2010: 44)

6.6. Resident's security

A sense of security is an important element of a socially sustainable urban area. This study examined the prevalence of cases of burglary and robbery in the neighbourhood, the frequency and a sense of safety in the estates after dark. The findings showed that 52.1% of the respondents had experienced robbery/burglary in their neighbourhood in the six months preceding the study. There were no statistically significant differences by gender. There were however reported significant differences by the estate of residence (p>.01). Got Rabuor recorded a high percentage of incidences with up to 89.5% reporting the cases of burglary and robbery, followed by Makongeni 66.2% and Sango/Mbuni 63.3%. In overall there were statistically significant differences (P=0.02) between Low and High income residential areas with 55.2% of the cases reported in Low income residential areas compared to 41.9% in High income residential areas. It was also reported that there was a statistically significant difference with level of education. The prevalence was higher among those with lower levels of education (61.2%) compared to 37.7% among those with higher levels of education. These are illustrated in Figure 4.

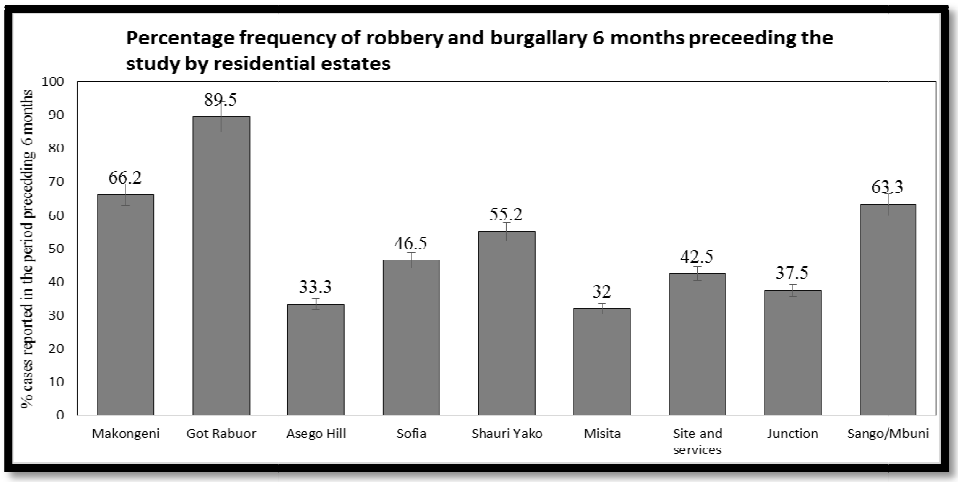


Figure 4: Frequency of Robbery/Burglary in Residential Neighbourhoods of Homa Bay Town
Source: Author

The residents were asked how often they experienced cases of robbery or violence in their neighbourhood to which they were expected to report in a Likert scale of "Very Frequently", "Frequently" "occasionally", "Rarely", "Very Rarely" and "Never." Cases that were rated as "Very Frequently" and "Frequently" were recorded as "High Frequency" and those recorded as either "occasionally", "Rarely", "Very Rarely" and "Never" were recoded as "Low Frequency." Findings established that 30.5% of the residents had experienced a high frequency prevalence of robbery/violence while 69.5% had not. There were no differences by gender. There were observable statistically significant differences (p=0.05) by residential estate. Got Rabuor reported a high frequency of 53.3% followed by Shauri Yako an informal settlement experienced a frequency of 40.7%. Misita had the lowest frequency of 5.6%. Table 2 shows these variations. The key informants linked insecurity to the social vices especially substance abuse that is predisposed with high unemployment rates in the town and high-income inequalities. The Manager Homa Bay Children's home observed that the level of prostitution has gone up significantly in the town accelerated by high unemployment rates. Drug abuse and crime has also been exacerbated by the lack of income for youths migrating into the town in search of jobs.

Prostitution in this town is real and at its highest level and that is why Homa Bay County leads in HIV prevalence currently at 26%. At night young ladies line up themselves along the streets waiting for clients. Drug abuse is equally common. We have rehabilitated many children who come from Shauri Yako slums. Crime has been accelerated with an increased number of jobless youths in the town. The youths are helpless and feel deserted by the society and this attitude fuels indulgence into these unsustainable social practices. —Manager, Homa Bay children's home

The county probation officer linked insecurity in the town to the widening gap between the rich and the poor. These disparities and the increasing number of unemployed youths is in his view, a 'ticking time bomb.'

The gap between the rich and the poor is very big and ever increasing. Only a few can afford three meals a day. Income is not evenly distributed. Only the top officials in National Government and county government enjoy at the expense of others. The net result is that crime has therefore surged and it is scaling up each other day. The number of unemployed persons is likely to go up with increased urbanization, left unchecked it is a ticking time bomb. —County probation Officer

Residential Estate	**Robbery/violence incidences**		**Total**
	High Frequency (%)	Low Frequency (%)	%
Makongeni	32.1	67.9	100.0
Got Rabuor	53.3	46.7	100.0
Asego Hill	25.0	75.0	100.0
Sofia	27.4	72.6	100.0
Shauri Yako	40.7	59.3	100.0
Misita	5.6	94.4	100.0
Site and services	26.2	73.8	100.0
Junction	12.5	87.5	100.0
Sango/Mbuni	27.8	72.2	100.0
	30.5	69.5	100.0

Table 3: Percentage Cases of Robbery/Violence Cases Reported In The Residential Areas of Homa Bay
Source: Author

The differences were also significant by the levels of education (P=0.02) with High frequency reported among those with low education (35.2%) compared to 23.6% among those with High Level education. The residents were asked how safe they felt walking after dark while outside where they lived. They responded with either "safe", "Fairly safe", "not safe", or "extremely unsafe" Those who responded as either extremely unsafe or not safe were recoded as "unsafe neighbourhoods" while those with "safe", "Fairly safe" were recoded as "Safe neighbourhoods" by this classification, the study established that 50.8% of the residents considered their neighbourhoods safe while 49.2% considered the neighbourhoods unsafe. Statistically significant differences (P=0.02) were reported by gender with 57.7% of male considering their neighbourhoods safe compared to 43.4% female. Differences were also reported by the residential areas (P=0.00) with results showing that Misita and Shauri Yako were considered most unsafe neighbourhood by 72.0% and 63.5% respectively. Asego Hill was considered safest (88.9%) followed by Makongeni (61.5%). These variations are shown in Figure 5.

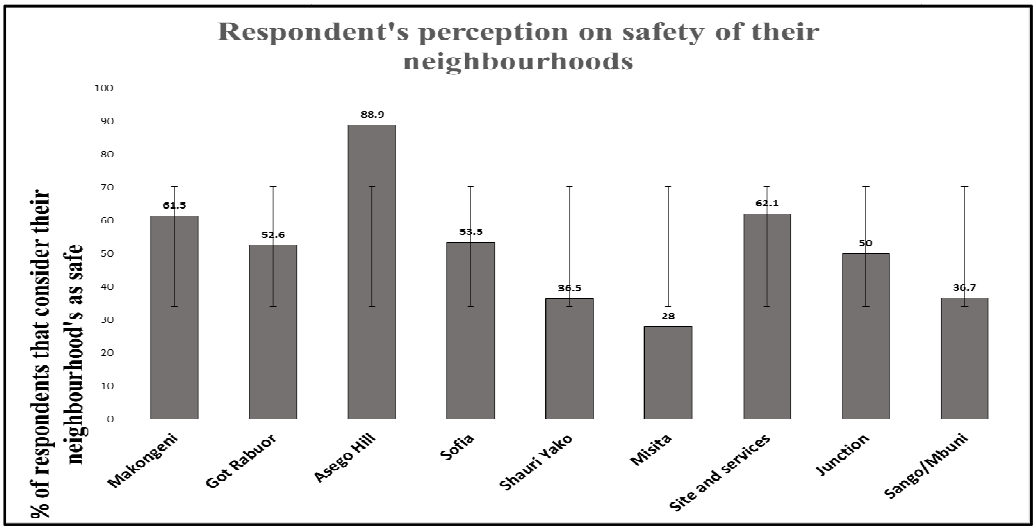


Figure 5: Safety of Residential Neighbourhoods
Source: Author

6.7. Anti-Social Behaviour

The residents were asked to what extent they considered anti-social-behaviour such as drug abuse, crime, truancy, prostitution, immorality, juvenile delinquency among others a problem in their neighbourhood. Those responses recorded as "To a great extent" was recoded as "High anti-social behaviour" while those recorded as "somewhat", "very little" or "not at all" were recoded as "Low Anti-social behaviour." The findings established that 39.5% of residents considered their neighbourhood to be high in anti-social behaviour. There were no significant differences by gender or age. Significant differences (P=0.05) were however reported by education levels with those with low education levels (43.2%) reporting High levels of anti-social behaviour compared 33.7% of those with High Education level reporting High anti-social behaviour in their neighbourhoods. There were also significant differences seen by levels of income with 44.5% of those with Low Levels of income reporting High anti-social behaviour compared to 22.9% of those with High income (P>.01) thus it is noted that anti-social behaviour is higher among those with low education and low-income levels. These findings were corroborated during interviews with key informants. According to the district social development officer, prostitution and crime including rape have been reported among people of different tribe further deepening suspicion and mistrust.

Prostitution is on the rise and very rampant in the night. Crime and immorality is high occasioned by jobless youths that are engaged in criminal activities. There is mistrust among residents of the town especially among people of different tribes and rape cases are likely to increase in the town. —Interview with Key informant, district social development officer.

On his part the County probation officer indicated that juvenile delinquency was on the rise and drug and substance abuse, alcoholism and crime had increased.

> "…It is overwhelming. Prostitution is very rampant especially at night. Young ladies parade themselves along some of the streets where I stay. Drug abuse is on the rise especially use of bhang. As a Probation Officer dealing with rehabilitation of criminals, most of them smoke bhang. Juvenile delinquency is not common but, on the rise, and those who are involved are always introduced to taking bhang or alcohol. Young people have indulged in drug abuse which leads to crime such as robbery because they do not have money. This creates a lot of conflict in the town now and in future. People will not be able to work together as a society in economic development projects especially young people who spend most of their time in illicit brew dens drinking. There would be a lot of mistrust among residents of the town if this trend persists…"—County Probation Officer

6.8. Access to clean water supply

The study examined the supply of water into the residential estates of Homa Bay since water is a key necessity for any sustainable urban area. The findings showed that majority (48.3%) relied on piped water into the plots. Another 40.8% depended on piped water but off the plot where they lived. Additionally, 7.7% depended on water from water vendors, 2.0% from roof catchment while 1.1% relied on water from open surfaces such as direct lake water. There were significant differences by the residential area (P>.01). Noticeable difference was in Shauri Yako informal estate where up to 60% relied on surface water from the neighbouring Lake Victoria and Makongeni Estate where 20% drew water directly from the lake. Site and Service had the highest percentage (33.8%) of those connected to piped water in their plots while Junction and Misita had the least percentage of 0% and 0.9% respectively. These findings present great disparities in access to clean water supply in the residential areas as reported in Table 3.

Residential Estate	Source of water for drinking				
	Piped water on plot	Piped water off plot	Private water vendors	roof catchment/rain water	surface water, lake or rivers
Makongeni	9.1	23.2		11.1	20.0
Got Rabuor	1.4	8.1		11.1	
Asego Hill	2.7	0.5	5.7		
Sofia	21.0	22.2	71.4	22.2	
Shauri Yako	19.6	23.2	14.3	22.2	60.0
Misita	5.0	7.6			
Site and services	33.8	5.9	5.7		
Junction	0.9	1.1		33.3	20.0
Sango/Mbuni	6.4	8.1	2.9		

Table 4: Sources of Water for Drinking and Domestic Use in Homa Bay Residential Areas
Source: Author

There were also significant differences by the level of income of the residential areas. It was established that 66.7% of those in High income areas relied on piped water in the plot where they lived compared to 42.8% of those residents in Low income areas. Those in high income residential areas did not rely on open water surfaces while 1.4% of those in low income areas relied on open water surfaces for their domestic water supply. In regard to the adequacy of the water supply, respondents were asked if they were confident that the water supply would be adequate now and in the future as the town population expands. The findings showed that only 13.5% indicated the water supply would be adequate pointing to a potential for future water scarcity if measures are not taken to address the situation. A significant difference was reported by the residential estates (p=0.01). It was established that residents of Asego Hill expressed more confidence (55.6%) and perhaps given the water distribution point is located in the residential area in Asego Hill before it flows with gravity to other residential areas. Apart from Asego Hill no other residential area had a confidence level of future adequacy of water supply at more than 20%. Table four shows the disparities.

Figure 2: Water Vendors Collecting Untreated Raw Water from Open Waters of L. Victoria for Domestic Use
Source: Author

Residential Estate	Do you consider that the water will be enough to meet the needs of future residents		Total
	YES (%)	NO (%)	(%)
Makongeni	6.2	93.8	100.0
Got Rabuor		100.0	100.0
Asego Hill	55.6	44.4	100.0
Sofia	12.3	87.7	100.0
Shauri Yako	18.8	81.3	100.0
Misita	16.0	84.0	100.0
Site and services	14.9	85.1	100.0
Junction	25.0	75.0	100.0
Sango/Mbuni	3.3	96.7	100.0
Totals	13.5	86.5	100.0

Table 5: Percentage of Respondents Who Believe Water Supply Shall Be Adequate With Future Population Growth of Homa Bay Town

6.9. Housing

Housing is an important consideration in the social sustainability of the urban areas. The study established that 33.3% of the households stayed in permanent brick/ block made houses. In addition, 5.7% stayed in residential flats while majority (57%) stayed in houses made of iron both at the roof and walls. Finally, 4.0% stayed in iron roof mud wall semi-permanent houses. Statistically significant variation (P>.01) was reported in the residential areas. Site and Service had 55.2% of the dwelling units made of permanent brick/block houses. In comparison to Shauri Yako estate majority (64.6%) of the dwelling units were made of corrugated iron sheets both at the walls and the roof famously nicknamed Kaunda houses. These houses were also reportedly the main dwelling units in Got Rabuor (73.7%), Sofia (65.8%), Misita (60%), Junction (50%) and Sango/Mbuni (70%).

According to key informants interviewed if legislative mechanisms addressing proper housing are not put in place then the future condition of housing in the town will worsen, slums will proliferate and proper housing will be a mirage to many residents. According to the Manager Homa Bay children's home, the population of the town keeps on growing leading to shortages in available housing calling for legislative measures.

Population in the town has increased rapidly with the coming of county government leading to the shortage of housing in the town. Landlords have taken the opportunity to increase the rents affecting the poor who cannot afford proper houses and therefore lives in poor squalid conditions. Legislators at the county level should focus on formulating laws concerning housing in the town otherwise in future it will worsen as population grows. They need to review land rates to enable more people acquire land—Manager, Homa Bay Children's Home

On her part, the Manager in the office of the women representative for Homa Bay County, further observed that the proliferation of informal settlements presenting challenges in delivery of essential services to those areas.

There are few houses compared to the current growing population. Some families (two or more) share a room which is enough for only one family. The cost of rent has gone up and many cannot afford proper houses (permanent and story building) instead resorting to *Mabati* houses popularly known as Kaunda name derived from Kaunda suite because it is made of corrugated iron sheet walls and roof. Slum areas are rapidly emerging with no access to piped water services and roads for vehicles to pass in case of fire emergencies. We need residents to be encouraged to construct storied buildings to accommodate more tenants. —The Manager Office of the Women Representative

Figure 3: A Low Income Residential Area in Sofia Estate
Source: Author

	Resident's state of housing				Total
Residential Estate	**Permanent brick/block house**	**Residential flat/story building**	**Iron roofed-iron walled House (Kaunda)**	**Semi-Permanent Iron roofed-mud walled**	**Totals**
Makongeni	35.4	1.5	60.0	3.1	100.0
Got Rabuor	21.1		73.7	5.3	100.0
Asego Hill	44.4		33.3	22.2	100.0
Sofia	27.2	4.4	65.8	2.6	100.0
Shauri Yako	28.1	5.2	64.6	2.1	100.0
Misita	20.0	4.0	60.0	16.0	100.0
Site and services	55.2	14.9	28.7	1.1	100.0
Junction	12.5		50.0	37.5	100.0
Sango/Mbuni	26.7	3.3	70.0		100.0
Total	33.3	5.7	57.0	4.0	100.0

Table 6: Percentage Residents Residential State Of Housing

In general, among the Low income residential areas a statistically significant difference was reported (P>.01). Overall, 60.9% were Kaunda houses with only 31.9% being made of permanent brick/block units. Even in the High income residential areas majority are still living in Kaunda houses (43.8%) with only 38.1% staying in permanent dwelling units. The variations are seen in Table 5. These dwelling units surprisingly are still the choice of the residents would wish to live in given options. It was further established that 62.8% responded in the affirmative. It was however established that residents of Misita, Shauri Yako, Site and Service and Sango and Mbuni least considered that their current state of dwelling unit is affordable and of preferred choice. The overall picture of variations in the key social sustainability indicators for Homa Bay Town are reported in Table 6.

Social sustainability parameter	**-VE-Measure**	**+VE-Measure**	**Significant difference**	**P-Value**
1. Adequacy of educational facilities	64.6% (inadequate)	35.4% (Adequate)	Gender	0.50
			Estate	0.01
2. Adequacy of health facilities	65.3% (Inadequate)	34.7% (Adequate)	No significance	
Discrimination on the basis of status	69.3% (Non-discrimination)	30.7 % (discrimination)	Gender	0.00
			Estate	0.05
			Income level	0.01
3.Community connectedness	16.3% (Not connected)	83.7% (connected)	gender	0.03
			Education	0.05
			Age-group	0.01
4. Approval of selected social activities	86.9% (Disapproval)	13.1% (Approval)	Level of education	0.01
5. Prevalence of burglary/robbery	69.5% (Not reported)	30.5% (Reported)	Residential estate	0.05
			Level of education	0.02
6. Safety of neighbourhood	49.2% (Unsafe)	50.8% (Safe)	Gender	0.02
			Residential Estate	0.00
7. Prevalence of anti-social behaviour	60.5% (Low prevalence)	39.5% (High prevalence)	Level of education	0.05
			Income	0.00

Social sustainability parameter	-VE-Measure	+VE-Measure	Significant difference	P-Value
			level	
8. Adequacy of water supply	86.5 % (Inadequate)	13.5% (Adequate)	Residential Estate	0.01
9. Affordability and choice of dwelling units	37.2 % (Not Affordable and of choice)	No significance		

Table 7: Summary of Social Sustainability Parameters
Source: Author

7. Conclusion and Recommendations

Perhaps previously considered secondary to ecological and economic sustainability, this paper demystifies this myth and shows that social sustainability is an important aspect of sustainable urbanization that needs the same emphasis like the other two pillars. The paper has illustrated the challenges of fast growing urban settlements in developing countries. It has shown how they grapple to meet basic socio-cultural services and the constraints they face to ensure they are socially sustainable. The paper has further shown that there are inequalities in the realization of the basic needs including access to water, affordable housing and educational facilities in rapidly growing towns such as Homa Bay. It is established that the social sustainability indicators for the town are weak whichportends potential future challenges that may affect the residents if not addressed in time. The town management need to come up with strategies to address security concerns, encourage social cohesion and inclusivity, put adequate systems for clean water supply, provide for better health care services, invest on affordable housing and encourage development of adequate educational infrastructure. To achieve this, public participation and political good will from the county and national government will be requisite.

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