International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 11 Issue 10 ǁ October 2023 ǁ PP. 22-52

Analysis of Drivers of Solid Waste Minimization at Source in Dar es Salaam City, Tanzania.

Abdon Salim Mapunda[1*], Richard Joseph Kimwaga[2], Shaaban Kassuwi[3]
[1*]*Department of integrated water resources engineering, P. O. Box 35131 Dar es Salaam, Tanzania*
[2]*Department of integrated water resources engineering, P. O. Box 35131 Dar es Salaam, Tanzania*
[3]*Department of Molecular Biology and Biotechnology, P. O. Box 35179 Dar es Salaam, Tanzania;*
Email: mapunda2000@yahoo.com[*]; rkimwaga2007@yahoo.com; kasshaab@gmail.com

Abstract
The challenges associated with municipal solid waste have risen from the past three decades to date. This article analyzed the drivers of solid waste minimization at source in Dar es Salaam City. Urbanization statistics show that Dar es Salaam City has been expanding at a rate of 4.39 %; indirectly implying solid waste generation at a rate of 0.82 Kg/day per capita. The City's growing population (from 2,478,000 in 2002 to 7,405,000 in 2022) influenced the desire to understand the drivers of solid waste minimization at household level. While data collection involved focus group discussion (FGD) and key informant interview (KII), applying spreadsheet and geographical information system technology enabled management of the collected data. The use of ordinary least square in ArcGIS (ArcMap v10.5) platform uncovered the understanding of variables that explain other variables. In this study the main variable were average household size, household number and built environment, each of these three variables are indirectly explained by other seven variables. Of the seven variables with respect to OLS VIF factor, most influential drivers were realized to be local government bylaw (LGBY) and situational factors (SITFA). The final results were mapped and displayed using geographically weighted regression analysis (GWR) with residual R-square as input variables. From the findings revealed in this article, challenges on Dar es Salaam City's urban solid waste can better be managed by implementing policy framework that capitalize on enforcing government bylaws. Furthermore, addressing situational factors is highly ranked as a solution to the city's solid waste challenges.

Keywords: *Solid waste minimization; Household level; Ordinary Least Square; geographically weighted regression*

Date of Submission: 22-09-2023 Date of acceptance: 05-10-2023

I. INTRODUCTION

Globally, solid waste generation and management is among the challenging aspect of the 21st century (Joseph et al., 2020). Across global regions, solid waste management encompasses techniques that intends to reduce the adverse effects of waste on human health(Malav et al., 2020), the environment(Abdullah, 2023), planetary resources (Abdullah, 2023; Islam, 2021; Malav et al., 2020), and aesthetics(de Souza Melaré et al., 2017; Kamdar et al., 2019). In solid waste management perspective, the words "techniques" and "types" are interchangeably applied, all meaning to communicate waste management reduction, recycle, and reuse. While waste management techniques include recycling, landfill, incineration, animal feed and biological reprocessing(Abdel-Shafy & Mansour, 2018; Malav et al., 2020; Waheeg et al., 2022); the techniques of waste management involve thermal treatments, recycling, incineration, landfills (collections and logistics) as well as chemical and biological treatment(Malav et al., 2020; Nyakuma & Ivase, 2021). All effort singly or combined that is geared to reduce, reuse and or recycling waste can be referred in a single term as waste minimization(Moh, 2017; Soma et al., 2020; Vanapalli et al., 2021).

In most globe human inhabited landscapes today, characterised by high population growth hence rapid urbanization (Isaksson, 2018; Korah et al., 2019); which reciprocates into high solid waste generation (Srivastava & Chakma, 2022). In an effort to ensure habitable anthropocene landscape, solid waste should be minimized to the very highest order, this means that toxicity (quality) and amount (quantity) of waste generated (Nabavi-Pelesaraei et al., 2017; Tong et al., 2019) should be decreasing. The spectrum of solid waste minimization focuses on preventing waste generation, the idea that concentrates mostly on waste recycling and reduction at source(Sharma et al., 2020). Practicing solid waste minimization at source requires several considerations along the waste generation chain (Ferronato et al., 2019; Sharma et al., 2020). As such, putting into practice concepts of planning, changes in attitude, genuine commitment, creative problem-solving skills and capital investment seem to be key requirement(Mitchell & Walinga, 2017).

The significance of solid waste minimization, in particular, at source is hinged on the double impact of protecting the environment(Mir et al., 2021; Mungai et al., 2020) while at the same time guaranteeing liveable anthropocene for socioeconomic activities(Robinson, 2020). Solid waste minimization, specifically, saves money through avoided disposal and raw materials purchase costs. From business bird's eye view, reduction of compliance costs and regulatory burdens hence lowering of short and long-term liability is profoundly considered a great benefit of solid waste minimization at sources. Furthermore, clean environment (household and workplace) decreases solid waste risks indirectly lowering life bills(Kazuva et al., 2018; Pujara et al., 2019).

In this study conducted in Dar es Salaam intended to understand spatiotemporal trends solid waste minimization at source, in this case, household level. The study profoundly uncovers the thinking on how solid waste minimization across various years responds to political will, local government bylaw, and personal attitude exposure to waste value, general environmental awareness, demographic trends and situation factors. Little knowledge is available on the use of geographical information techniques in integrating such factors, in addressing solid waste minimization in rapid urbanizing city such as Dar es Salaam city in Tanzania(Batista et al., 2021; Mojtahedi et al., 2021; Mussa & Suryabhagavan, 2021). That being the case, worth to undertake this study; which its results will form key inputs in policy formulation for informed decision-making on solid waste minimization, green urbanization and inclusive city.

II. STUDY AREA

The study will be conducted in Dar es Salaam, a region covering a total area of 1, 800km^2, of which landmass is 1, 350 km^2. This Tanzania's most populous and industrialized city sits at latitude 6^o 37′ 20.4212″S and longitude 39^o 8′ 42.0144″E at about 24 meter above sea level on the western shoreline of the Indian Ocean, East Africa region. Dar es Salaam is home to over 5.3 million people (NBS 2022), in 92 administrative wards in five districts of Ilala, Kinondoni, Temeke, Kigamboni and Ubungo. It receives an average of 172 millimetre of rainfall annually, with a maximum and minimum temperature of 29.5^{o}C and 21.7^{o}C respectively.

With a population growth rate of 5.6, this metro is the third among the fastest growing cities in Africa and ninth at global level (Coffetti et al., 2022). The city experiences an acute shortage of residential units annually, with over 75 per cent of place and space values being informal settlement. Literatures (Pasquini et al., 2020; Todd et al., 2019) provide that such informal settlement attracts informal jobs by 40 per cent. Combining the multiplier effect of informal settlements and jobs characterizes a great deal to SWG, with significant retro effect reflected in solid waste management (SWM) challenges. As Aryampa et al., (2019) describes city's SWG to being a result of both population growth and economic growth, innovations and knowledge creation for city's SWM is required now more than tomorrow. Collection and landfill disposal capacity of only 15 per cent of an estimated 4252 tons of daily SWG proves the overburdened of SWM across all five districts/municipalities in Dar es Salaam city.

In view of this background, the proposed research study will dwell on developing solid waste minimization model at source, such that to reduce, recycle and or reuse wastes as a strategy to relief the dumpsite overburden at municipal levels. The study will take place in Dar es Salaam city (Figure 1)

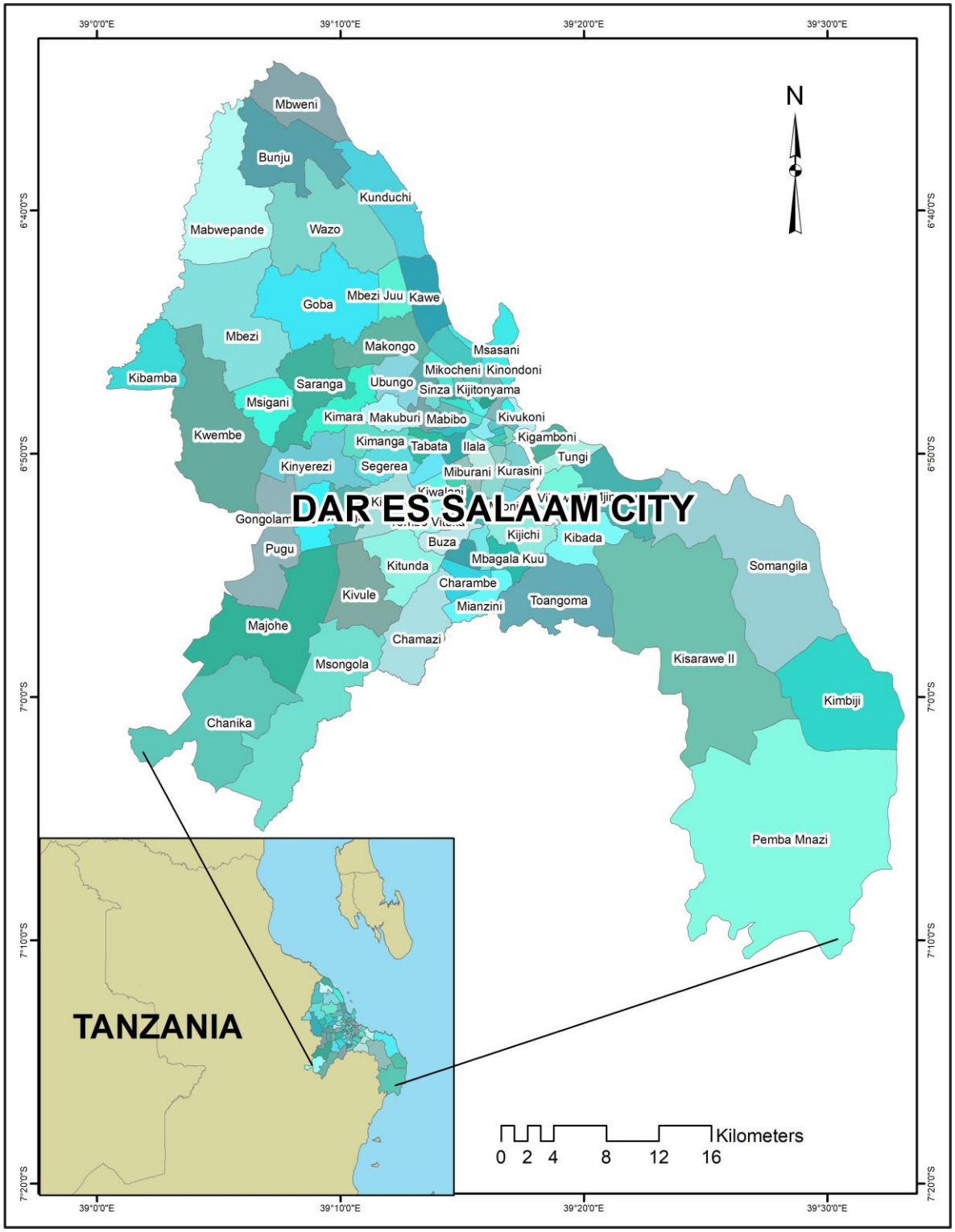

Fig. 1: Layout and Location of the Study Area

III. METHODOLOGY

1.1. Data Collection, Preparations and Management

1.1.1. Drivers of Household Solid Waste Minimization

Identification and selection of solid waste minimization at source was partly hinged on first author's experience of more than 20 years of dealing with solid waste management in Tanzania, in particular, Dar es Salaam city. Details on each factor that influence solid waste minimization at source (Table 1) were triangulated with secondary sources.

Table 1: Drivers or Factors of Solid Waste Minimization at Sources

Variable	Code	Description	Reference
Political Will	**PwFa**	Lack of political will decrease rate of waste minimization at HH level	(Serge Kubanza, 2021)
Local Government By-Law Enforcement	**LGBy**	Effective bylaw enforcement promotes solid waste minimization at HH level	(Oteng-Ababio et al., 2017; Serge Kubanza, 2021)
Personal Attitude	**PerAt**	Personal values, attitudes and value orientations about wastes management influences sold waste minimization behaviour.	(Kim et al., 2020; Mintz et al., 2019)
Exposure to Waste Values	**ExWV**	Solid waste minimization practice increases with perceived value of wastes	(Nanda & Berruti, 2021)
Environmental Awareness	**EnvAw**	Awareness on multiplier effect of solid waste in ecological system, public health etc. can be linked to the rate of minimizing solid waste in specific locality	(Magazzino & Falcone, 2022; Rafew & Rafizul, 2021)
Demographic Information	**Demog**	Population structure, density and pyramid is key determinant of rate of solid waste minimization.	(GIRMA, 2020; Salem et al., 2020; Thomson et al., 2019)
Situational Factors	**SitFA**	Location of disposal sites, availability of private solid waste service providers, waste collection points/stations, and logistics has great influence on solid waste minimization.	(Acquah, 2019)

1.1.2. Analytical Hierarch Process (AHP Model)

Globally, the pattern and trends of solid waste minimization as it is to the general aspect of solid waste management is influenced by many factors/drivers (Serge Kubanza, 2021). Most of these drivers (Table 1) are conflicting in their functioning mechanism but also their effectiveness/efficient from community decision perspectives(Rebehy et al., 2023; Tsai et al., 2020). As such, the use of AHP as part of multicriteria decision analysis (Contreras et al., 2008) provide a glimpse on which driver is most effective at which ward in comparison to the others. The study's adopted AHP method as developed by Saaty (Kharat et al., 2016; Saaty, 1988, 2001, 2008, 2013), thus data management in Table 2 and Table3. Applying the model guideline as developed on the drivers presented in Table 1 delivered the eigenvector on each driver (Table 3). The consistence ratio (CR) for this analysis, which involved seven criteria, was 0.08. Such results complied with AHP decision rule that require CR to be less or equal to 0.1.

Table 2: AHP Pairwise Comparison Matrix

PAIRWISE COMPARISON		PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA
		A	**B**	**C**	**D**	**E**	**F**	**G**
Political Will	**A**	1	0.25	0.333	0.333	0.5	0.333	0.333
Local Government By-Law Enforcement	**B**	2	1	0.5	0.5	0.333	0.5	0.5
Personal Attitude	**C**	3	2	1	0.5	0.333	0.5	0.333
Exposure to Waste Values	**D**	3	2	2	1	0.5	0.5	0.333
Environmental Awareness	**E**	2	3	3	2	1	0.333	0.5
Demographic Information	**F**	3	2	2	2	3	1	0.333
Situational Factors	**G**	3	2	3	3	2	3	1
Total		17	12.25	11.83	9.333	7.667	6.167	3.333

Table 3: AHP Normalization Matrix

NORMALIZATION MATRIX		A	B	C	D	E	F	G	Eigenvectors
PwFa	**A**	0.058824	0.020408	0.028169	0.035714	0.065217	0.054054	0.1	0.051769491
LGBy	**B**	0.117647	0.081633	0.042254	0.053571	0.043478	0.081081	0.15	0.081380572
PerAt	**C**	0.176471	0.163265	0.084507	0.053571	0.043478	0.081081	0.1	0.100339101

ExWV	**D**	0.176471	0.163265	0.169014	0.107143	0.065217	0.081081	0.1	0.123170187
EnvAw	**E**	0.117647	0.244898	0.253521	0.214286	0.130435	0.054054	0.15	0.166405814
Demog	**F**	0.176471	0.163265	0.169014	0.214286	0.391304	0.162162	0.1	0.196643172
SitFa	**G**	0.176471	0.163265	0.253521	0.321429	0.26087	0.486486	0.3	0.280291663

Weighted Sum	**Number of Criterion (N)**	**Lambda Maximum**	**Consistency Index (CI)**	**Consistency Ratio (CR)**
7.636644138	7	1.32	0.106107356	0.080384361

1.1.3. Percentage Impact on Variables

The study applied focus group discussion (FGD) and key informant interview (KII) to understanding level at which each of the drivers contribute to solid waste minimization at source. The data collection in both cases, FGD and KII extracted the percentage, at which each driver contributes to solid waste minimization. Table 4: provide the description of the main respondents involved in this study.

Table 4: Main Respondents in the Focus Group Discussion

Designation of Respondent	**Code**	**District/Municipality/Roles**	**Method Applied**
Head of Department (Environment)	HoD	As head of environmental department (HoDE) in Ilala (Dar es Salaam City), Kinondoni, Ubungo, Temeke and Kigamboni are responsible for planning, implementation, monitoring and evaluation of environmental matters within their jurisdiction.	KII
Municipal Environmental Management Officer	MEMO	As Municipal Environmental Management Officer (MEMO) in Ilala (Dar es Salaam City), Kinondoni, Ubungo, Temeke and Kigamboni are responsible for implementation and coordination of environmental matters within their jurisdiction.	KII
Waste Collection Agents			
JUZA GENERAL SUPPLIES & CONSULTANCY SERVICES LTD		Responsible for waste management operation in Kigamboni Municipal	FGD
KAJENJERE TRADING LTD		Responsible for waste management operation in Dar es Salaam City (Ilala)	FGD
SATEKI TRADING LTD		Responsible for waste management operation in Dar es Salaam City (Ilala)	FGD
WEJISA LTD		Responsible for waste management operation in Dar es Salaam City (Ilala) and Temeke Municipal	FGD
MORE FORE LESS LTD		Responsible for waste management operation in Kinondoni and Ubungo Municipalities	FGD
TIRIMA ENTERPRISES LTD		Responsible for waste management operation in Dar es Salaam City (Ilala) and Temeke Municipal	FGD

Data preparation in this study, further involved computation of total quantity of solid waste at which the percentage impact acted on. Such computation applied inputs extracted from Tanzania national census data for year 2002, 2012 & 2022; and various recognizable secondary sources as described in Equation 1, Equation 2 and Equation 3. While Equation 1 was designed for average household size (AHHS), Equation 2 was for household number (HHN) and Equation 3 was designed to generate input data with respect to built-environment (BE). The three main variables in this study which are AHHS & HHN as explanatory variables and BE as dependent variable interacting under general regression analysis model (Equation 4).

$SW_{mAHHS} = AHHS_{yr} * WG_{co} * PI_i$ Eqn. 1

$SW_{mHHN} = HHN_{yr} * R_{dep} * PI_i$ Eqn. 2

$SW_{mBE} = T_{as} * R_{ub} * U_{pcr} * S_{swg} * PI_i$ Eqn. 3

$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \varepsilon_i$ Eqn.4

Where;
SW_{mAHHS} is the quantity of solid waste minimized at household level at a respective year (yr)

AHHS is an average household size
WG_{co} is the coefficient of waste generation for Dar es Salaam city
PI is percentage impact of each driver/variable
SW_{mHHN} is the quantity of solid waste minimized at household number at year, yr
R_{dep} is the depreciation rate of a building (household)
SW_{mBE} is the quantity of solid waste minimized in built environment
T_{as} Total area size of respective ward (square kilometre)
R_{ub} is the rate of urbanization for Dar es Salaam city
U_{pcr} is the unbuilt area with regard to Tanzania plot coverage policy guideline
S_{swg} is the rate of street solid waste generation

Further analysis on the data generated using Equation 1, equation 2 and Equation 3; and eigenvectors (Table 3) formed inputs for Equation 5, Equation 6 and Equation 7. As such, delivered study data (Appendix 1) that formed inputs for Ordinary Least Squares (OLS) in ArcMap v10.5 platform.

$SW_{evAHHS} = SW_{mAHHS} * EV_i$ Eqn. 5

$SW_{evHHN} = SW_{mHHN} * EV_i$ Eqn. 6

$SW_{evBE} = SW_{mBE} * EV_i$ Eqn. 7

Where;
SW_{mAHHS} is the quantity of solid waste minimized at household level at year yr
SW_{mHHN} is the quantity of solid waste minimized at household number at year yr
SW_{mBE} is the quantity of solid waste minimized in built environment at year yr
SW_{evAHHS} is the weighted quantity of solid waste minimized at year, yr at household level
SW_{evHH} is the weighted quantity of solid waste minimized at year, yr at household number
SW_{evBE} is the weighted quantity of solid waste minimized at year, yr at in built environment
EV_i is the eigenvector of driver i

1.1.4. Ordinary Least Squares (OLS) on Analysis of Variables

In this spatiotemporal panel data analysis study, the main variables were average household size (AHHS) and household number (HHN) as explanatory variables of built environment (BE). The use of OLS in this study is due to the fact that AHHS, HHN & BE were explained by other drivers of solid waste minimization at source, presented in Table 1. OLS is considered among the best model on factors that explain other factors, in particular, on non-spatial data analysis for estimating the regression coefficient(Atabati et al., 2022; Ouchen & Montargot, 2022). Equation 8 displays how the model was developed. In OLS regression analysis, the rule of thumb is that, variance inflation factors (VIF) should not exceed 7.5. Such limit is applicable across OLS analysis, regardless of significant or insignificant results. The OLS results formed ley inputs in modelling AHHS, HHN & BE in geographical weighted regression analysis.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} \cdots + \beta_k X_{ki} + \varepsilon_i \quad \text{Eqn.8}$$

*W*here:

Y_i = *i*th observation of the depended variable Y, I = 1, 2…, n

X_j = independent variables, j = 1, 2…., k

X_{ji} = *i*th observation of the *j*th independent variable

β_0 = intercept term

β_j = slope coefficient for each of the independent variables

ε_i = error term for the *i*th observation

n = number of observations

k = number of independent variables

1.1.5. Geographical Weighted Regression Analysis

Geographically weighted regression (GWR) is a part of the past decade's advent on information technology on data management(Mansour et al., 2021; RAMLAN, 2021). The use of GWR as geographical information system (GIS) in-built for modelling(Wheeler, 2009) spatial data with high degree of heterogeneity have rose in the past decade. Subscribing to the general regression equation, Equation 4, GWR analysis was run using standard residual autocorrelation in Arc Map v10.5 but presented results using local R-square.

IV: RESULT AND DISCUSSION

The results obtained are discussed below

1. Results

1.2. Most Influential Drivers on Household Solid Waste Minimization

Analysis was done using OLS regression to understand how drivers of solid waste management (Table 1) can explain the trend of solid waste minimization with regard to household size (AHHS), household number (HHN) and built environment (BE). Results showed that across Dar es Salaam city, using such drivers, solid waste minimization can better be realized at AHHS than at HHN & BE. On the basis of VIF rule thumb (Datu, 2016; Thompson et al., 2017), results on all drivers (Table 1) for year 2002, 2012 and 2022 was less than 7.5 (Table 5). Nonetheless, in the results, local government bylaw (LGBY) and situational factors (SITFA) recorded the lowest VIF values, as such emerging as the most influential drivers of the solid waste minimization at household level in Dar es Salaam city. A spatial trend of the solid waste minimization with regard to AHHS across study period in the study area is as displayed in Figure 2.

Theoretical analysis of OLS regression provides that the more standard error value moves toward zero indicates the exactness between estimated and true values applied in the model (Macaskill et al., 2023).

Table 5: OLS Results Estimation

Variable	Coefficient	Standard Error	Adjusted R- Square	VIF
LGBY	0.1428	0.0000	0.99	1.9517
SITFA	0.1428	0.0000	0.99	1.8164

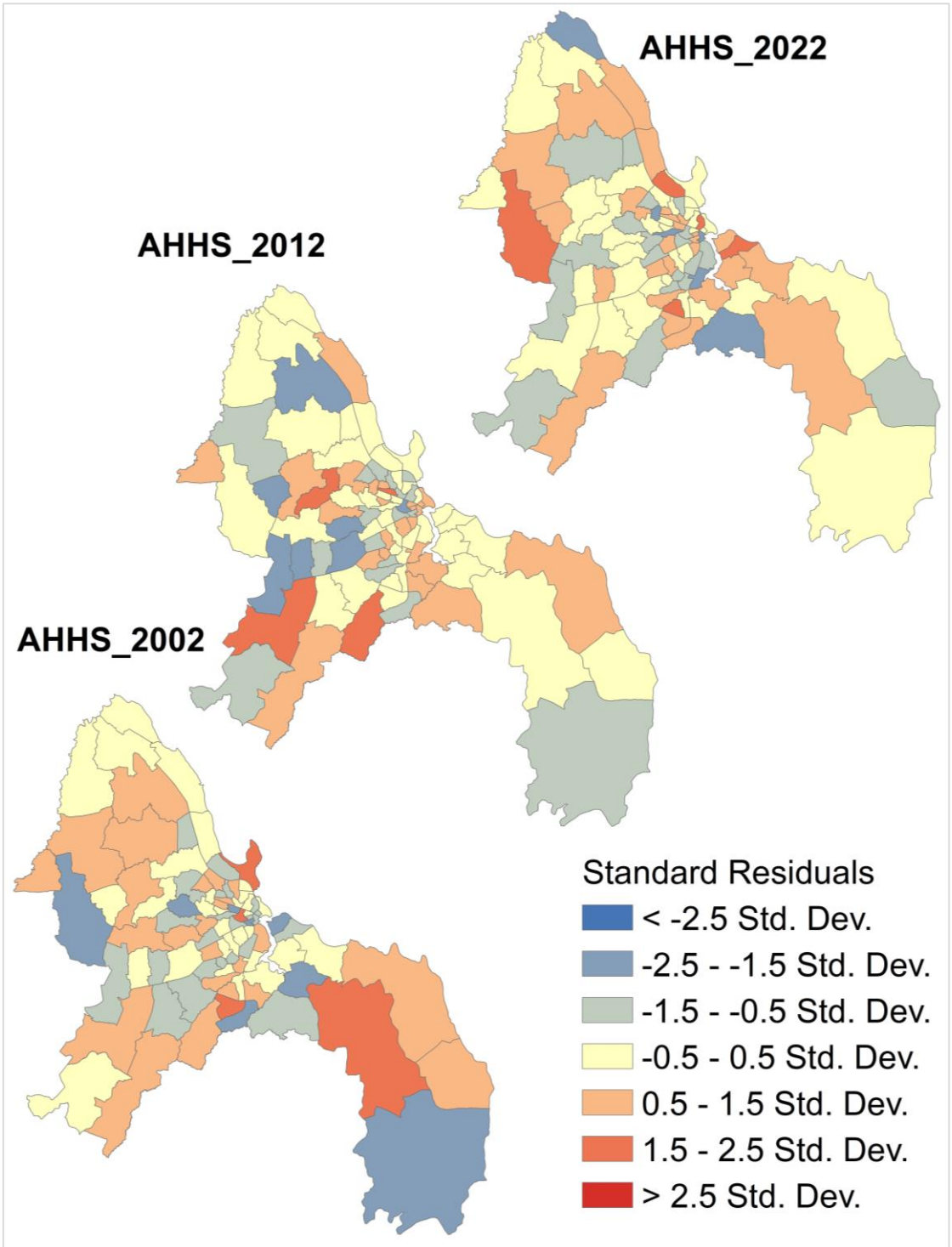

Fig. 2: Trends and Dynamics of Drivers of Solid Waste Minimization in Dar es Salaam

1.3. Spatial Trends of Household Solid Waste Minimization

Further analysis of the OLS standard residual results in geographical weighted regression (GWR) (Arc Map 10.5) for AHHS, HHN and BE the delivered the result displayed in Figure 3. Generally, AHHS, HHN & BE demonstrated weak relationship as factors for solid waste minimization in year 2022 compared to poor relationship for year 2012 and 2002.

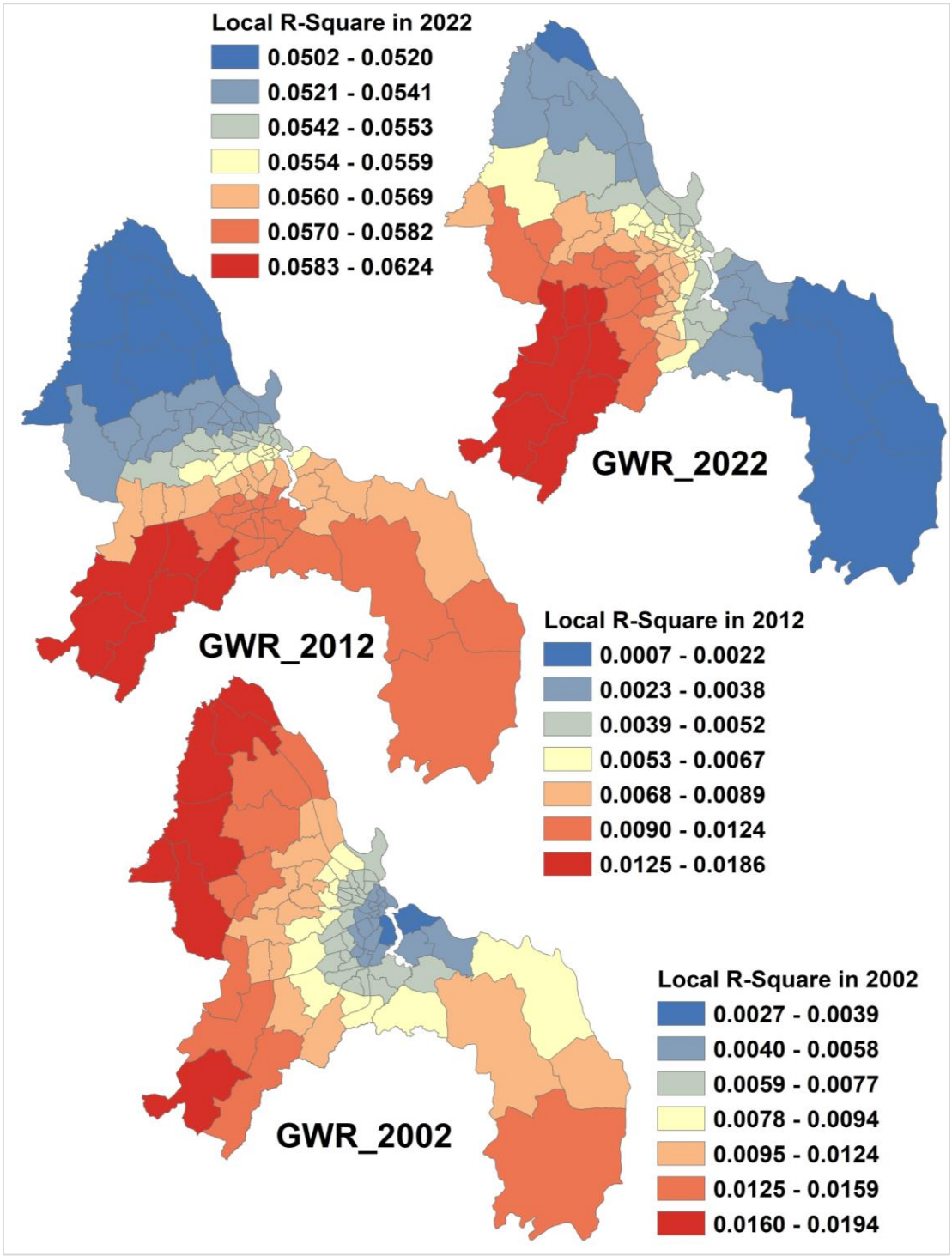

Fig. 3: GWR Results on AHHS, HHN & BE Regression

2. Discussion

The study findings show that solid waste minimization is driven by average household size (AHHS) as compared to HHN and BE. This study derived HHN and BE solid waste generation using depreciation rate, urban settlement development plot coverage ratio and street pollution factor. From OLS results (Table 5 & Figure 2), the role of AHHS on solid waste minimization was profoundly explained by all seven drivers. However, most influential drivers were realized to be local government bylaw (LGBY) and situational factors (SITFA), which displayed the lowest VIF than the rest of the drivers. This means that to minimize sold wastes in the city of Dar es Salaam, responsible authorities should focus on LGBY and SITFA drivers at household level.

The role of LGBY on solid waste management in cities has been well documented in other global regions(Adedara et al., 2023; Kumar et al., 2023; Muheirwe et al., 2023; Yavçan & Memişoğlu, 2023). Through

LGBY, stakeholders, including local government are responsible to facilitates, coordinate and regulate activities of solid waste management in the city. Availability of LGBY at household level facilitates preparation and implementation of short, medium and long-term solid waste minimization plan. Similarly, waste minimization and local government sensitization campaigns is inseparable, as such, collaborative efforts amongst stakeholders' end-up minimizing solid wastes in city areas.

In the context of this study, SITFA referred to the role of solid waste management aspects such as land use planning, availability of landfills, transfer stations, material recovery facilities (MRF), incinerators, waste collection bins waste trucks and overall waste management infrastructures, and waste collection service providers. These factors are significantly influential on solid waste minimization(Qu et al., 2023). The challenges of implementing SITFA in the waste minimization can clearly be analysed using the case of rapid population growth, which indirectly result into high rate of urbanization and rising informal settlement. As such, the variation of solid waste between unplanned and planned land use in Dar es Salaam city is vivid (Mapunda et al., 2023). This means that any solid waste minimization in the city of Dar es Salaam should profoundly consider the aspect of informal settlement, availability of overall waste management infrastructures and infrastructural logistics, and waste collection service providers.

The study contextualized AHHS as number of occupants in a household unit; LGBY and SITFA don't work as standalone drivers. This means that political sensitization, local government by-law enforcement and personal attitude towards wastes are likely to influence proper waste management hence minimization. Correspondingly, household occupant exposure to solid waste value in the integral of general environmental awareness is a motivation to solid waste sorting; this don't only reduce the quantities of wastes taken to landfill but also provide occupants with opportunity for income generation. In a nutshell, almost all the drivers in the context of AHHS is determined by population pyramid in the respective household (Nukusheva et al., 2023). A household dominated by children under 10 or under 18 will respond differently on solid waste minimization compared to young adult dominance or elderly in a household (Jürgens, 2023).

V. CONCLUSION

The findings in this study have established how AHHS is the determinant of solid waste minimization at source as compared to BE and HHN. The study has further explained how situational factors and local government by-law enforcement are more influential drivers in solid waste minimization at household level while personal attitude, exposure to waste values, environmental awareness, demographic information and political will all can better explain AHHS as a unit of solid waste minimization strategy at source. This result is a significant input to policy formulation on solid waste minimization in Dar es Salaam city.

REFERENCES

[1]. Abdel-Shafy, H. I., & Mansour, M. S. M. (2018). Solid waste issue: Sources, composition, disposal, recycling, and valorization. Egyptian Journal of Petroleum, 27(4), 1275–1290.

[2]. Abdullah, K. H. (2023). Time flies, waste piles: A bibliometric analysis of solid waste management research. Ecocycles, 9(2), 59–70.

[3]. Acquah, M. M. (2019). Urban growth and access to utilities in sub-urban settlements: a study of Effia-Kwesimintsim sub metro, Western Region. University of Cape Coast.

[4]. Adedara, M. L., Taiwo, R., & Bork, H.-R. (2023). Municipal Solid Waste Collection and Coverage Rates in Sub-Saharan African Countries: A Comprehensive Systematic Review and Meta-Analysis. Waste, 1(2), 389–413.

[5]. Aryampa, S., Maheshwari, B., Sabiiti, E., Bateganya, N. L., & Bukenya, B. (2019). Status of waste management in the East African Cities: Understanding the drivers of waste generation, collection and disposal and their impacts on Kampala City's sustainability. Sustainability, 11(19), 5523.

[6]. Atabati, A., Adab, H., Zolfaghari, G., & Nasrabadi, M. (2022). Modeling groundwater nitrate concentrations using spatial and non-spatial regression models in a semi-arid environment. Water Science and Engineering, 15(3), 218–227.

[7]. Batista, M., Caiado, R. G. G., Quelhas, O. L. G., Lima, G. B. A., Leal Filho, W., & Yparraguirre, I. T. R. (2021). A framework for sustainable and integrated municipal solid waste management: Barriers and critical factors to developing countries. Journal of Cleaner Production, 312, 127516.

[8]. Coffetti, D., Crotti, E., Gazzaniga, G., Carrara, M., Pastore, T., & Coppola, L. (2022). Pathways towards sustainable concrete. Cement and Concrete Research, 154, 106718.

[9]. Contreras, F., Hanaki, K., Aramaki, T., & Connors, S. (2008). Application of analytical hierarchy process to analyze stakeholders preferences for municipal solid waste management plans, Boston, USA. Resources, Conservation and Recycling, 52(7), 979–991.

[10]. Datu, N. (2016). How do insurer specific indicators and macroeconomic factors affect the profitability of insurance business? A panel data analysis on the Philippine Non-life Insurance market. The DLSU Research Congress, 4(1), 2449–3309.

[11]. de Souza Melaré, A. V., González, S. M., Faceli, K., & Casadei, V. (2017). Technologies and decision support systems to aid solid-waste management: a systematic review. Waste Management, 59, 567–584.

[12]. Ferronato, N., Rada, E. C., Portillo, M. A. G., Cioca, L. I., Ragazzi, M., & Torretta, V. (2019). Introduction of the circular economy within developing regions: A comparative analysis of advantages and opportunities for waste valorization. Journal of Environmental Management, 230, 366–378.

[13]. GIRMA, T. (2020). HOUSEHOLD SOLID WASTE MANAGEMENT PRACTICES AND ITS DETERMINANTS: A CASE OF HOSANNA TOWN, ETHIOPIA.

[14]. Isaksson, C. (2018). Impact of urbanization on birds. Bird Species, 235, 257.

[15]. Islam, S. (2021). Waste management strategies in fashion and textiles industry: Challenges are in governance, materials culture and design-centric. In Waste Management in the Fashion and Textile Industries (pp. 275–293). Elsevier.

[16]. Joseph, F. G., Folorunsho, J. O., Yusuf, Y. O., & Aruya, E. I. (2020). Assessment of solid waste management techniques in Maitama,

Abuja, Nigeria. Planning, 15(2), 227–233.
[17]. Jürgens, U. (2023). Does Food Shopping Behaviour Determine Food Waste Vulnerability in Private Households? Quantitative Analysis on Case Studies from Germany. Sustainability, 15(6), 4818.
[18]. Kamdar, I., Ali, S., Bennui, A., Techato, K., & Jutidamrongphan, W. (2019). Municipal solid waste landfill siting using an integrated GIS-AHP approach: A case study from Songkhla, Thailand. Resources, Conservation and Recycling, 149, 220–235.
[19]. Kazuva, E., Zhang, J., Tong, Z., Si, A., & Na, L. (2018). The DPSIR model for environmental risk assessment of municipal solid waste in Dar es Salaam city, Tanzania. International Journal of Environmental Research and Public Health, 15(8), 1692.
[20]. Kharat, M. G., Raut, R. D., Kamble, S. S., & Kamble, S. J. (2016). The application of Delphi and AHP method in environmentally conscious solid waste treatment and disposal technology selection. Management of Environmental Quality: An International Journal, 27(4), 427–440.
[21]. Kim, M. J., Hall, C. M., & Kim, D.-K. (2020). Predicting environmentally friendly eating out behavior by value-attitude-behavior theory: does being vegetarian reduce food waste? Journal of Sustainable Tourism, 28(6), 797–815.
[22]. Korah, P. I., Matthews, T., & Tomerini, D. (2019). Characterising spatial and temporal patterns of urban evolution in Sub-Saharan Africa: The case of Accra, Ghana. Land Use Policy, 87, 104049.
[23]. Kumar, A., Singh, E., Mishra, R., Lo, S. L., & Kumar, S. (2023). Global trends in municipal solid waste treatment technologies through the lens of sustainable energy development opportunity. Energy, 275, 127471.
[24]. Macaskill, P., Takwoingi, Y., Deeks, J. J., & Gatsonis, C. (2023). Understanding meta-analysis. Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy, 203–247.
[25]. Magazzino, C., & Falcone, P. M. (2022). Assessing the relationship among waste generation, wealth, and GHG emissions in Switzerland: Some policy proposals for the optimization of the municipal solid waste in a circular economy perspective. Journal of Cleaner Production, 351, 131555.
[26]. Malav, L. C., Yadav, K. K., Gupta, N., Kumar, S., Sharma, G. K., Krishnan, S., Rezania, S., Kamyab, H., Pham, Q. B., & Yadav, S. (2020). A review on municipal solid waste as a renewable source for waste-to-energy project in India: Current practices, challenges, and future opportunities. Journal of Cleaner Production, 277, 123227.
[27]. Mansour, S., Al Kindi, A., Al-Said, A., Al-Said, A., & Atkinson, P. (2021). Sociodemographic determinants of COVID-19 incidence rates in Oman: Geospatial modelling using multiscale geographically weighted regression (MGWR). Sustainable Cities and Society, 65, 102627.
[28]. Mapunda, A. S., Joseph, K. R., & Kasuwi, S. (2023). Impact of Population Dynamics on Solid Waste Generation Trends in Dar Es Salaam Metropolitan. International Journal of Advanced Research, 6(1), 75–87.
[29]. Mintz, K. K., Henn, L., Park, J., & Kurman, J. (2019). What predicts household waste management behaviors? Culture and type of behavior as moderators. Resources, Conservation and Recycling, 145, 11–18.
[30]. Mir, I. S., Cheema, P. P. S., & Singh, S. P. (2021). Implementation analysis of solid waste management in Ludhiana city of Punjab. Environmental Challenges, 2, 100023.
[31]. Mitchell, I. K., & Walinga, J. (2017). The creative imperative: The role of creativity, creative problem solving and insight as key drivers for sustainability. Journal of Cleaner Production, 140, 1872–1884.
[32]. Moh, Y. (2017). Solid waste management transformation and future challenges of source separation and recycling practice in Malaysia. Resources, Conservation and Recycling, 116, 1–14.
[33]. Mojtahedi, M., Fathollahi-Fard, A. M., Tavakkoli-Moghaddam, R., & Newton, S. (2021). Sustainable vehicle routing problem for coordinated solid waste management. Journal of Industrial Information Integration, 23, 100220.
[34]. Muheirwe, F., Kombe, W. J., & Kihila, J. M. (2023). Solid waste collection in the informal settlements of African Cities: A regulatory dilemma for actor's participation and collaboration in Kampala. Urban Forum, 1–22.
[35]. Mungai, E. M., Ndiritu, S. W., & Rajwani, T. (2020). Do voluntary environmental management systems improve environmental performance? Evidence from waste management by Kenyan firms. Journal of Cleaner Production, 265, 121636.
[36]. Mussa, A., & Suryabhagavan, K. V. (2021). Solid waste dumping site selection using GIS-based multi-criteria spatial modeling: a case study in Logia town, Afar region, Ethiopia. Geology, Ecology, and Landscapes, 5(3), 186–198.
[37]. Nabavi-Pelesaraei, A., Bayat, R., Hosseinzadeh-Bandbafha, H., Afrasyabi, H., & Chau, K. (2017). Modeling of energy consumption and environmental life cycle assessment for incineration and landfill systems of municipal solid waste management-A case study in Tehran Metropolis of Iran. Journal of Cleaner Production, 148, 427–440.
[38]. Nanda, S., & Berruti, F. (2021). Municipal solid waste management and landfilling technologies: a review. Environmental Chemistry Letters, 19, 1433–1456.
[39]. Nukusheva, A., Rustembekova, D., Abdizhami, A., Au, T., & Kozhantayeva, Z. (2023). Regulatory Obstacles in Municipal Solid Waste Management in Kazakhstan in Comparison with the EU. Sustainability, 15(2), 1034.
[40]. Nyakuma, B. B., & Ivase, T. J. (2021). Emerging trends in sustainable treatment and valorisation technologies for plastic wastes in Nigeria: A concise review. Environmental Progress & Sustainable Energy, 40(5), e13660.
[41]. Oteng-Ababio, M., Owusu-Sekyere, E., & Amoah, S. T. (2017). Thinking globally, acting locally: formalizing informal solid waste management practices in Ghana. Journal of Developing Societies, 33(1), 75–98.
[42]. Ouchen, A., & Montargot, N. (2022). Non-spatial and spatial econometric analysis of tourism demand in a panel of countries around the world. Spatial Economic Analysis, 17(2), 262–283.
[43]. Pasquini, L., van Aardenne, L., Godsmark, C. N., Lee, J., & Jack, C. (2020). Emerging climate change-related public health challenges in Africa: A case study of the heat-health vulnerability of informal settlement residents in Dar es Salaam, Tanzania. Science of the Total Environment, 747, 141355.
[44]. Pujara, Y., Pathak, P., Sharma, A., & Govani, J. (2019). Review on Indian Municipal Solid Waste Management practices for reduction of environmental impacts to achieve sustainable development goals. Journal of Environmental Management, 248, 109238.
[45]. Qu, D., Shevchenko, T., Shams Esfandabadi, Z., & Ranjbari, M. (2023). College Students' Attitude towards Waste Separation and Recovery on Campus. Sustainability, 15(2), 1620.
[46]. Rafew, S. M., & Rafizul, I. M. (2021). Application of system dynamics model for municipal solid waste management in Khulna city of Bangladesh. Waste Management, 129, 1–19.
[47]. RAMLAN, N. E. M. I. F. B. (2021). GEOGRAPHICALLY WEIGHTED REGRESSION MODEL FOR SPATIAL DOWNSCALING OF GLOBAL PRECIPITATION MEASUREMENTS DATA IN KELANTAN.
[48]. Rebehy, P. C. P. W., Junior, A. P. S., Ometto, A. R., de Freitas Espinoza, D., Rossi, E., & Novi, J. C. (2023). Municipal solid waste management (MSWM) in Brazil: Drivers and best practices towards to circular economy based on European Union and BSI. Journal of Cleaner Production, 401, 136591.
[49]. Robinson, N. A. (2020). Making Environmental Law Function in the Anthropocene. Environmental Policy and Law, 50(6), 471–477.
[50]. Saaty, T. L. (1988). What is the analytic hierarchy process? Mathematical models for decision support. G. Mitra, 109–121.

[51]. Saaty, T. L. (2001). Fundamentals of the analytic hierarchy process. The Analytic Hierarchy Process in Natural Resource and Environmental Decision Making, 15–35.
[52]. Saaty, T. L. (2008). Decision making with the analytic hierarchy process. International Journal of Services Sciences, 1(1), 83–98.
[53]. Saaty, T. L. (2013). The modern science of multicriteria decision making and its practical applications: The AHP/ANP approach. Operations Research, 61(5), 1101–1118.
[54]. Salem, M., Raab, K., & Wagner, R. (2020). Solid waste management: The disposal behavior of poor people living in Gaza Strip refugee camps. Resources, Conservation and Recycling, 153, 104550.
[55]. Serge Kubanza, N. (2021). The role of community participation in solid waste management in Sub-Saharan Africa: a study of Orlando East, Johannesburg, South Africa. South African Geographical Journal, 103(2), 223–236.
[56]. Sharma, H. B., Vanapalli, K. R., Cheela, V. R. S., Ranjan, V. P., Jaglan, A. K., Dubey, B., Goel, S., & Bhattacharya, J. (2020). Challenges, opportunities, and innovations for effective solid waste management during and post COVID-19 pandemic. Resources, Conservation and Recycling, 162, 105052.
[57]. Soma, T., Li, B., & Maclaren, V. (2020). Food waste reduction: A test of three consumer awareness interventions. Sustainability, 12(3), 907.
[58]. Srivastava, A. N., & Chakma, S. (2022). Bioreactor landfills: sustainable solution for disposal of municipal solid waste. In Advanced Organic Waste Management (pp. 315–328). Elsevier.
[59]. Thompson, C. G., Kim, R. S., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. Basic and Applied Social Psychology, 39(2), 81–90.
[60]. Thomson, D. R., Linard, C., Vanhuysse, S., Steele, J. E., Shimoni, M., Siri, J., Caiaffa, W. T., Rosenberg, M., Wolff, E., & Grippa, T. (2019). Extending data for urban health decision-making: a menu of new and potential neighborhood-level health determinants datasets in LMICs. Journal of Urban Health, 96, 514–536.
[61]. Todd, P. A., Heery, E. C., Loke, L. H. L., Thurstan, R. H., Kotze, D. J., & Swan, C. (2019). Towards an urban marine ecology: characterizing the drivers, patterns and processes of marine ecosystems in coastal cities. Oikos, 128(9), 1215–1242.
[62]. Tong, L., Tang, Y., Wang, F., Hu, B., Shi, P., & Hu, Q. (2019). Investigation of controlling factors on toxic metal leaching behavior in municipal solid wastes incineration fly ash. Environmental Science and Pollution Research, 26, 29316–29326.
[63]. Tsai, F. M., Bui, T.-D., Tseng, M.-L., Wu, K.-J., & Chiu, A. S. F. (2020). A performance assessment approach for integrated solid waste management using a sustainable balanced scorecard approach. Journal of Cleaner Production, 251, 119740.
[64]. Vanapalli, K. R., Sharma, H. B., Ranjan, V. P., Samal, B., Bhattacharya, J., Dubey, B. K., & Goel, S. (2021). Challenges and strategies for effective plastic waste management during and post COVID-19 pandemic. Science of The Total Environment, 750, 141514.
[65]. Waheeg, S. A., Adesola, R. O., & Garba, S. M. (2022). Biochemistry of wastes recycling. World News of Natural Sciences, 42, 169–188.
[66]. Wheeler, D. C. (2009). Simultaneous coefficient penalization and model selection in geographically weighted regression: the geographically weighted lasso. Environment and Planning A, 41(3), 722–742.
[67]. Yavçan, B., & Memişoğlu, F. (2023). Institutional creation as a local governance response to Syrian refugees: The case of Turkish municipalities. American Behavioral Scientist, 00027642231182632.

APPENDICES
AVERAGE HOUSEHOLD SIZE (AHHS) 2022

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	AHHS
Azimio	-6.873111	39.263651	0.056035	0.132129	0.108607	0.326633	0.315206	0.319270	0.379235	0.233874
Buguruni	-6.829557	39.244077	0.093604	0.147144	0.155506	0.222704	0.257896	0.304758	0.506795	0.241201
Bunju	-6.626190	39.128864	0.040753	0.138803	0.131645	0.129279	0.152827	0.180597	0.478065	0.178853
Buza	-6.891646	39.238482	0.122683	0.090756	0.209809	0.206039	0.417545	0.274121	0.742380	0.294762
Chamazi	-6.955001	39.219140	0.129051	0.228224	0.218860	0.307039	0.311112	0.428918	0.786050	0.344179
Chang'ombe	-6.839403	39.263702	0.099335	0.129727	0.213265	0.254519	0.392984	0.319270	0.579195	0.284042
Chanika	-7.015876	39.083951	0.094241	0.197527	0.152214	0.149479	0.252438	0.298308	0.510243	0.236350
Charambe	-6.919858	39.250934	0.108462	0.168165	0.158385	0.229774	0.358189	0.423274	0.522884	0.281305
Gerezani	-6.824023	39.274660	0.109524	0.215211	0.035380	0.195434	0.176024	0.138673	0.790647	0.237270
Goba	-6.728786	39.152650	0.125655	0.172836	0.182657	0.317644	0.353413	0.387800	0.552763	0.298967
Gongo la Mboto	-6.876498	39.148867	0.057733	0.181511	0.083924	0.206039	0.185576	0.274121	0.547017	0.219417
Hananasif	-6.793984	39.268754	0.070044	0.150147	0.123417	0.196949	0.184211	0.217684	0.448186	0.198663
Ilala	-6.825771	39.258696	0.135843	0.240235	0.230379	0.323199	0.327487	0.451493	0.827421	0.362294
Jangwani	-6.813892	39.272524	0.082779	0.197794	0.160442	0.256034	0.266083	0.220103	0.717098	0.271476
Kariakoo	-6.818159	39.274754	0.158767	0.220216	0.235315	0.319967	0.330216	0.496642	0.758469	0.359942
Kawe	-6.724312	39.224395	0.007004	0.176173	0.054304	0.166649	0.022515	0.026606	0.682622	0.162268
Keko	-6.833888	39.274664	0.087874	0.164161	0.192531	0.181799	0.368422	0.338620	0.517138	0.264363
Kibada	-6.889878	39.332898	0.066224	0.156153	0.128354	0.236339	0.372516	0.377319	0.448186	0.255013
Kibamba	-6.770341	39.038250	0.048394	0.050716	0.218860	0.268659	0.311112	0.245096	0.524033	0.238124

Kiburugwa	-6.902563	39.251786	0.088638	0.144141	0.118480	0.309059	0.343861	0.348294	0.413710	0.252312
Kigamboni	-6.825343	39.308222	0.111858	0.082748	0.191296	0.306837	0.380703	0.299920	0.676876	0.292891
Kigogo	-6.816524	39.244814	0.061129	0.149480	0.105316	0.171295	0.165927	0.196077	0.514840	0.194866
Kijichi	-6.887289	39.292058	0.114618	0.096094	0.222151	0.290879	0.442107	0.290245	0.786050	0.320306
Kijitonyama	-6.775708	39.235361	0.065799	0.124122	0.122430	0.187859	0.177662	0.209944	0.605626	0.213349
Kilakala	-6.869738	39.242693	0.112071	0.198194	0.190062	0.249974	0.270176	0.372481	0.682622	0.296512
Kimanga	-6.822777	39.188109	0.098062	0.154151	0.162911	0.233309	0.270176	0.319270	0.530928	0.252687
Kimara	-6.799975	39.169077	0.037145	0.186850	0.057595	0.176749	0.095517	0.028218	0.723993	0.186581
Kimbiji	-7.000497	39.509611	0.074289	0.105103	0.135347	0.212099	0.286551	0.310401	0.603328	0.246731
Kinondoni	-6.782747	39.269260	0.050941	0.156153	0.108607	0.166649	0.163743	0.193497	0.565404	0.200714
Kinyerezi	-6.840029	39.149602	0.096788	0.202865	0.156328	0.153519	0.259260	0.306370	0.524033	0.242738
Kipawa	-6.868857	39.199513	0.086600	0.170167	0.027975	0.154529	0.139182	0.109648	0.625163	0.187609
Kisarawe II	-6.960348	39.408005	0.104854	0.139470	0.190721	0.307039	0.388890	0.533084	0.742380	0.343777
Kisutu	-6.813745	39.284277	0.056035	0.176173	0.081455	0.199979	0.180118	0.266058	0.530928	0.212964
Kitunda	-6.907967	39.209040	0.125655	0.222218	0.213100	0.298959	0.302925	0.417631	0.765364	0.335122
Kivukoni	-6.808407	39.290719	0.091270	0.218080	0.212277	0.304009	0.293373	0.381350	0.790647	0.327287
Kivule	-6.927940	39.180935	0.144333	0.192188	0.148101	0.302999	0.191034	0.419243	0.689517	0.298202
Kiwalani	-6.857929	39.230932	0.102519	0.161158	0.170316	0.243914	0.282457	0.333782	0.555062	0.264173
Kunduchi	-6.658542	39.197554	0.043300	0.147478	0.139873	0.137359	0.162379	0.191884	0.507945	0.190031
Kurasini	-6.843023	39.288212	0.071742	0.121452	0.175417	0.183819	0.266083	0.272508	0.478065	0.224155
Kwembe	-6.818573	39.081068	0.116146	0.190186	0.212607	0.268659	0.352594	0.435045	0.567703	0.306134
Mabibo	-6.807635	39.224743	0.076412	0.110108	0.160442	0.181799	0.266083	0.266058	0.517138	0.225434
Mabwepande	-6.659630	39.088175	0.081718	0.175172	0.143987	0.229774	0.214913	0.253965	0.522884	0.231773
Magomeni	-6.801897	39.260708	0.006580	0.165496	0.051012	0.156549	0.021150	0.024993	0.641251	0.152433
Majohe	-6.949138	39.121173	0.099335	0.208204	0.160442	0.157559	0.266083	0.314432	0.537824	0.249126
Makangarawe	-6.879339	39.246794	0.103920	0.186049	0.181835	0.223209	0.371152	0.356357	0.547017	0.281363
Makongo	-6.757706	39.194932	0.108675	0.149480	0.157974	0.274719	0.305654	0.335395	0.478065	0.258566
Makuburi	-6.806585	39.199203	0.038206	0.040039	0.172784	0.212099	0.245615	0.193497	0.413710	0.187993
Makumbusho	-6.787558	39.249937	0.063676	0.144141	0.111075	0.166649	0.143275	0.169310	0.517138	0.187895
Makurumla	-6.803802	39.241701	0.059219	0.144809	0.140284	0.197252	0.169201	0.199947	0.570001	0.211530
Manzese	-6.794179	39.230471	0.043088	0.143207	0.107373	0.175739	0.162242	0.191723	0.519896	0.191896
Mbagala	-6.896447	39.263374	0.096661	0.180577	0.162911	0.199979	0.292691	0.372481	0.568852	0.267736
Mbagala Kuu	-6.905361	39.281519	0.083713	0.136133	0.111898	0.291889	0.324758	0.328945	0.390727	0.238295
Mbezi	-6.740341	39.091404	0.048394	0.164828	0.156328	0.153519	0.181482	0.214459	0.567703	0.212388
Mbezi juu	-6.722866	39.202515	0.047545	0.170834	0.052658	0.161599	0.087330	0.025800	0.661937	0.172529
Mburahati	-6.810558	39.241213	0.077049	0.165162	0.135759	0.216644	0.202632	0.239452	0.493005	0.218529
Mbweni	-6.592090	39.137856	0.007853	0.197527	0.060886	0.186849	0.025244	0.029831	0.765364	0.181936
Mchafukoge	-6.820901	39.281666	0.089147	0.175172	0.028797	0.159074	0.143275	0.112873	0.643550	0.193127
Mchikichini	-6.817147	39.264479	0.052639	0.165496	0.076519	0.187859	0.169201	0.249933	0.498751	0.200057
Mianzini	-6.932836	39.261971	0.114618	0.096094	0.222151	0.290879	0.442107	0.290245	0.786050	0.320306
Miburani	-6.852302	39.272801	0.115467	0.204200	0.195822	0.257549	0.278364	0.383769	0.703308	0.305497
Mikocheni	-6.762813	39.244308	0.074289	0.151815	0.129588	0.205029	0.205361	0.242677	0.579195	0.226851
Mjimwema	-6.860836	39.357034	0.114618	0.156153	0.213265	0.218159	0.343861	0.435368	0.455082	0.276644
Msasani	-6.759848	39.273613	0.064441	0.149747	0.149335	0.209978	0.198129	0.234131	0.644699	0.235780

Msigani	-6.800745	39.115798	0.099335	0.108106	0.162911	0.272699	0.196492	0.290245	0.661937	0.255961
Msongola	-7.011977	39.143508	0.135843	0.240235	0.230379	0.323199	0.327487	0.451493	0.827421	0.362294
Mtoni	-6.867840	39.278656	0.085539	0.144809	0.209151	0.219169	0.317253	0.324914	0.570001	0.267262
Mwananyamala	-6.784754	39.257756	0.072379	0.144809	0.117329	0.181597	0.160741	0.189949	0.619876	0.212383
Mzimuni	-6.808747	39.256431	0.044574	0.151815	0.143987	0.141399	0.167155	0.197528	0.522884	0.195620
Ndugumbi	-6.799150	39.247407	0.072379	0.155152	0.127531	0.203514	0.190352	0.224940	0.463126	0.205285
Pembamnazi	-7.095698	39.472534	0.128796	0.135800	0.228322	0.366224	0.403900	0.357969	0.765364	0.340911
Pugu	-6.896464	39.119412	0.078534	0.187651	0.197879	0.261589	0.277681	0.328138	0.680324	0.287399
Sandali	-6.853314	39.245984	0.114872	0.180577	0.176486	0.216644	0.360235	0.345876	0.530928	0.275088
Saranga	-6.788181	39.145984	0.122259	0.168165	0.177721	0.309059	0.343861	0.377319	0.537824	0.290887
Segerea	-6.839944	39.196793	0.129900	0.172970	0.162911	0.272699	0.294738	0.377319	0.620566	0.290157
Sinza	-6.781629	39.221924	0.006155	0.154818	0.047721	0.146449	0.019786	0.023381	0.599880	0.142599
Somangila	-6.908111	39.451088	0.103665	0.111109	0.167436	0.224219	0.302925	0.453428	0.552763	0.273649
Tabata	-6.826313	39.224188	0.099845	0.156954	0.165873	0.237551	0.275089	0.325075	0.540582	0.257281
Tandale	-6.792006	39.241567	0.063167	0.144809	0.119879	0.197252	0.190352	0.224940	0.484501	0.203557
Tandika	-6.865387	39.255053	0.096661	0.187183	0.162911	0.199979	0.292691	0.372481	0.568852	0.268680
Temeke	-6.847941	39.254696	0.083713	0.136133	0.111898	0.291889	0.324758	0.328945	0.390727	0.238295
Toangoma	-6.931747	39.315519	0.124169	0.104102	0.240663	0.315119	0.478949	0.314432	0.851554	0.346998
Tungi	-6.833454	39.322478	0.077049	0.143140	0.165626	0.266639	0.315206	0.266058	0.644699	0.268345
Ubungo	-6.782291	39.205799	0.035659	0.037370	0.161265	0.197959	0.229241	0.180597	0.386130	0.175460
Ukonga	-6.874333	39.170738	0.081506	0.170834	0.131645	0.129279	0.218324	0.257996	0.441291	0.204411
Upanga Magharibi	-6.802382	39.273508	0.101882	0.200196	0.032911	0.181799	0.163743	0.128998	0.735485	0.220717
Upanga Mashariki	-6.804820	39.280842	0.062827	0.197527	0.091329	0.224219	0.201950	0.298308	0.595283	0.238778
Vijibweni	-6.860249	39.318021	0.082864	0.149480	0.171138	0.210079	0.327487	0.283795	0.478065	0.243273
Vingunguti	-6.843309	39.227454	0.105278	0.186182	0.178543	0.250479	0.253802	0.349907	0.641251	0.280778
Wazo	-6.677505	39.156571	0.074289	0.168165	0.100791	0.205029	0.191034	0.225746	0.603328	0.224055
Yombo Vituka	-6.877826	39.226253	0.118863	0.210206	0.201581	0.265124	0.286551	0.395056	0.723993	0.314482

BUILT ENVIRONMENT (BE) 2022

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	BE
Azimio	-6.873111	39.263651	0.000002	0.000006	0.000005	0.000014	0.000014	0.000014	0.000017	0.000010
Buguruni	-6.829557	39.244077	0.000006	0.000010	0.000010	0.000015	0.000017	0.000020	0.000033	0.000016
Bunju	-6.626190	39.128864	0.000002	0.000008	0.000007	0.000007	0.000008	0.000010	0.000026	0.000010
Buza	-6.891646	39.238482	0.000006	0.000004	0.000010	0.000009	0.000019	0.000012	0.000034	0.000013
Chamazi	-6.955001	39.219140	0.000011	0.000020	0.000019	0.000027	0.000027	0.000037	0.000068	0.000030
Chang'ombe	-6.839403	39.263702	0.000041	0.000053	0.000088	0.000105	0.000162	0.000131	0.000238	0.000117
Chanika	-7.015876	39.083951	0.000006	0.000013	0.000010	0.000010	0.000017	0.000020	0.000035	0.000016
Charambe	-6.919858	39.250934	0.000005	0.000008	0.000007	0.000011	0.000017	0.000020	0.000024	0.000013
Gerezani	-6.824023	39.274660	0.000006	0.000013	0.000002	0.000012	0.000010	0.000008	0.000047	0.000014
Goba	-6.728786	39.152650	0.000018	0.000025	0.000026	0.000046	0.000051	0.000056	0.000080	0.000043
Gongo la Mboto	-6.876498	39.148867	0.000004	0.000013	0.000006	0.000015	0.000013	0.000020	0.000039	0.000016
Hananasif	-6.793984	39.268754	0.000031	0.000067	0.000055	0.000087	0.000082	0.000097	0.000199	0.000088
Ilala	-6.825771	39.258696	0.000089	0.000158	0.000151	0.000212	0.000215	0.000297	0.000544	0.000238
Jangwani	-6.813892	39.272524	0.000133	0.000319	0.000259	0.000413	0.000429	0.000355	0.001156	0.000438

Kariakoo	-6.818159	39.274754	0.000071	0.000098	0.000105	0.000142	0.000147	0.000221	0.000337	0.000160
Kawe	-6.724312	39.224395	0.000007	0.000188	0.000058	0.000177	0.000024	0.000028	0.000727	0.000173
Keko	-6.833888	39.274664	0.000089	0.000167	0.000196	0.000185	0.000375	0.000345	0.000526	0.000269
Kibada	-6.889878	39.332898	0.000078	0.000183	0.000151	0.000278	0.000437	0.000443	0.000526	0.000299
Kibamba	-6.770341	39.038250	0.000013	0.000014	0.000058	0.000072	0.000083	0.000065	0.000140	0.000064
Kiburugwa	-6.902563	39.251786	0.000004	0.000006	0.000005	0.000013	0.000014	0.000014	0.000017	0.000010
Kigamboni	-6.825343	39.308222	0.000008	0.000006	0.000014	0.000023	0.000028	0.000022	0.000051	0.000022
Kigogo	-6.816524	39.244814	0.000008	0.000021	0.000015	0.000024	0.000023	0.000027	0.000072	0.000027
Kijichi	-6.887289	39.292058	0.000017	0.000014	0.000032	0.000042	0.000064	0.000042	0.000114	0.000046
Kijitonyama	-6.775708	39.235361	0.000039	0.000073	0.000072	0.000111	0.000105	0.000124	0.000358	0.000126
Kilakala	-6.869738	39.242693	0.000034	0.000060	0.000058	0.000076	0.000082	0.000113	0.000208	0.000090
Kimanga	-6.822777	39.188109	0.000230	0.000362	0.000382	0.000548	0.000634	0.000750	0.001246	0.000593
Kimara	-6.799975	39.169077	0.000003	0.000013	0.000004	0.000012	0.000007	0.000002	0.000050	0.000013
Kimbiji	-7.000497	39.509611	0.000073	0.000103	0.000133	0.000209	0.000282	0.000305	0.000594	0.000243
Kinondoni	-6.782747	39.269260	0.000137	0.000419	0.000291	0.000447	0.000439	0.000519	0.001516	0.000538
Kinyerezi	-6.840029	39.149602	0.000050	0.000104	0.000080	0.000079	0.000133	0.000157	0.000269	0.000124
Kipawa	-6.868857	39.199513	0.000030	0.000059	0.000010	0.000054	0.000048	0.000038	0.000217	0.000065
Kisarawe II	-6.960348	39.408005	0.000067	0.000089	0.000121	0.000195	0.000248	0.000339	0.000473	0.000219
Kisutu	-6.813745	39.284277	0.000118	0.000370	0.000171	0.000420	0.000378	0.000558	0.001114	0.000447
Kitunda	-6.907967	39.209040	0.000241	0.000426	0.000408	0.000573	0.000580	0.000800	0.001467	0.000642
Kivukoni	-6.808407	39.290719	0.000028	0.000067	0.000065	0.000093	0.000090	0.000117	0.000242	0.000100
Kivule	-6.927940	39.180935	0.000148	0.000197	0.000152	0.000311	0.000196	0.000430	0.000708	0.000306
Kiwalani	-6.857929	39.230932	0.000257	0.000404	0.000427	0.000612	0.000709	0.000837	0.001392	0.000663
Kunduchi	-6.658542	39.197554	0.000008	0.000026	0.000024	0.000024	0.000028	0.000033	0.000088	0.000033
Kurasini	-6.843023	39.288212	0.000078	0.000132	0.000191	0.000200	0.000290	0.000297	0.000521	0.000244
Kwembe	-6.818573	39.081068	0.000009	0.000014	0.000016	0.000020	0.000026	0.000032	0.000042	0.000023
Mabibo	-6.807635	39.224743	0.000006	0.000008	0.000012	0.000014	0.000020	0.000020	0.000039	0.000017
Mabwepande	-6.659630	39.088175	0.000014	0.000030	0.000025	0.000039	0.000037	0.000043	0.000089	0.000040
Magomeni	-6.801897	39.260708	0.000004	0.000111	0.000034	0.000105	0.000014	0.000017	0.000431	0.000102
Majohe	-6.949138	39.121173	0.000012	0.000025	0.000019	0.000019	0.000031	0.000037	0.000063	0.000029
Makangarawe	-6.879339	39.246794	0.000002	0.000003	0.000003	0.000004	0.000006	0.000006	0.000009	0.000005
Makongo	-6.757706	39.194932	0.000003	0.000004	0.000004	0.000007	0.000008	0.000009	0.000013	0.000007
Makuburi	-6.806585	39.199203	0.000001	0.000001	0.000006	0.000008	0.000009	0.000007	0.000015	0.000007
Makumbusho	-6.787558	39.249937	0.000001	0.000003	0.000002	0.000003	0.000003	0.000003	0.000010	0.000004
Makurumla	-6.803802	39.241701	0.000002	0.000005	0.000005	0.000007	0.000006	0.000007	0.000021	0.000008
Manzese	-6.794179	39.230471	0.000003	0.000009	0.000007	0.000012	0.000011	0.000013	0.000034	0.000013
Mbagala	-6.896447	39.263374	0.000008	0.000014	0.000013	0.000016	0.000023	0.000029	0.000045	0.000021
Mbagala Kuu	-6.905361	39.281519	0.000008	0.000013	0.000010	0.000027	0.000030	0.000031	0.000037	0.000022
Mbezi	-6.740341	39.091404	0.000007	0.000025	0.000024	0.000023	0.000028	0.000033	0.000087	0.000032
Mbezi juu	-6.722866	39.202515	0.000019	0.000069	0.000021	0.000065	0.000035	0.000010	0.000266	0.000069
Mburahati	-6.810558	39.241213	0.000061	0.000131	0.000108	0.000172	0.000161	0.000190	0.000391	0.000173
Mbweni	-6.592090	39.137856	0.000017	0.000418	0.000129	0.000395	0.000053	0.000063	0.001618	0.000385
Mchafukoge	-6.820901	39.281666	0.000085	0.000166	0.000027	0.000151	0.000136	0.000107	0.000611	0.000183
Mchikichini	-6.817147	39.264479	0.000028	0.000088	0.000041	0.000100	0.000090	0.000132	0.000264	0.000106

Mianzini	-6.932836	39.261971	0.000246	0.000206	0.000476	0.000624	0.000948	0.000622	0.001685	0.000687
Miburani	-6.852302	39.272801	0.000042	0.000074	0.000071	0.000094	0.000102	0.000140	0.000257	0.000111
Mikocheni	-6.762813	39.244308	0.000014	0.000028	0.000024	0.000038	0.000038	0.000045	0.000106	0.000042
Mjimwema	-6.860836	39.357034	0.000051	0.000069	0.000095	0.000097	0.000153	0.000193	0.000202	0.000123
Msasani	-6.759848	39.273613	0.000043	0.000099	0.000099	0.000139	0.000132	0.000155	0.000428	0.000157
Msigani	-6.800745	39.115798	0.000514	0.000560	0.000843	0.001412	0.001017	0.001503	0.003427	0.001325
Msongola	-7.011977	39.143508	0.000481	0.000850	0.000815	0.001144	0.001159	0.001598	0.002928	0.001282
Mtoni	-6.867840	39.278656	0.000218	0.000369	0.000533	0.000558	0.000808	0.000828	0.001452	0.000681
Mwananyamala	-6.784754	39.257756	0.000010	0.000021	0.000017	0.000026	0.000023	0.000027	0.000089	0.000030
Mzimuni	-6.808747	39.256431	0.000046	0.000157	0.000149	0.000146	0.000173	0.000204	0.000540	0.000202
Ndugumbi	-6.799150	39.247407	0.000017	0.000037	0.000030	0.000048	0.000045	0.000054	0.000110	0.000049
Pembamnazi	-7.095698	39.472534	0.000034	0.000036	0.000060	0.000097	0.000107	0.000095	0.000202	0.000090
Pugu	-6.896464	39.119412	0.000106	0.000253	0.000267	0.000353	0.000375	0.000443	0.000918	0.000388
Sandali	-6.853314	39.245984	0.000018	0.000028	0.000028	0.000034	0.000056	0.000054	0.000083	0.000043
Saranga	-6.788181	39.145984	0.000013	0.000018	0.000019	0.000033	0.000037	0.000041	0.000058	0.000031
Segerea	-6.839944	39.196793	0.000019	0.000025	0.000024	0.000040	0.000043	0.000055	0.000091	0.000042
Sinza	-6.781629	39.221924	0.000000	0.000010	0.000003	0.000010	0.000001	0.000002	0.000040	0.000010
Somangila	-6.908111	39.451088	0.000021	0.000023	0.000034	0.000045	0.000061	0.000092	0.000112	0.000055
Tabata	-6.826313	39.224188	0.000010	0.000015	0.000016	0.000023	0.000026	0.000031	0.000052	0.000025
Tandale	-6.792006	39.241567	0.000005	0.000011	0.000009	0.000014	0.000014	0.000016	0.000035	0.000015
Tandika	-6.865387	39.255053	0.000011	0.000021	0.000018	0.000022	0.000032	0.000041	0.000063	0.000030
Temeke	-6.847941	39.254696	0.000011	0.000018	0.000015	0.000039	0.000044	0.000044	0.000053	0.000032
Toangoma	-6.931747	39.315519	0.000028	0.000023	0.000054	0.000070	0.000107	0.000070	0.000190	0.000077
Tungi	-6.833454	39.322478	0.000007	0.000014	0.000016	0.000026	0.000030	0.000025	0.000062	0.000026
Ubungo	-6.782291	39.205799	0.000355	0.000373	0.001608	0.001973	0.002285	0.001800	0.003849	0.001749
Ukonga	-6.874333	39.170738	0.000079	0.000166	0.000128	0.000126	0.000212	0.000251	0.000429	0.000199
Upanga Magharibi	-6.802382	39.273508	0.000021	0.000042	0.000007	0.000038	0.000034	0.000027	0.000153	0.000046
Upanga Mashariki	-6.804820	39.280842	0.000027	0.000084	0.000039	0.000095	0.000086	0.000126	0.000252	0.000101
Vijibweni	-6.860249	39.318021	0.000033	0.000059	0.000067	0.000082	0.000129	0.000111	0.000188	0.000096
Vingunguti	-6.843309	39.227454	0.000018	0.000031	0.000030	0.000042	0.000043	0.000059	0.000108	0.000047
Wazo	-6.677505	39.156571	0.000016	0.000037	0.000022	0.000045	0.000042	0.000049	0.000132	0.000049
Yombo Vituka	-6.877826	39.226253	0.000007	0.000012	0.000012	0.000015	0.000017	0.000023	0.000042	0.000018

HOUSEHOLD NUMBER (HHN) 2022

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	HHN
Azimio	-6.873111	39.263651	0.001306	0.003079	0.002531	0.007612	0.007346	0.007440	0.008838	0.005450
Buguruni	-6.829557	39.244077	0.001549	0.002435	0.002574	0.003686	0.004268	0.005044	0.008388	0.003992
Bunju	-6.626190	39.128864	0.001378	0.004692	0.004450	0.004370	0.005166	0.006105	0.016161	0.006046
Buza	-6.891646	39.238482	0.002818	0.002085	0.004819	0.004733	0.009591	0.006296	0.017052	0.006771
Chamazi	-6.955001	39.219140	0.007059	0.012484	0.011972	0.016796	0.017018	0.023463	0.042998	0.018827
Chang'ombe	-6.839403	39.263702	0.000447	0.000583	0.000959	0.001144	0.001767	0.001435	0.002604	0.001277
Chanika	-7.015876	39.083951	0.002081	0.004362	0.003361	0.003301	0.005575	0.006588	0.011268	0.005219
Charambe	-6.919858	39.250934	0.003930	0.006094	0.005739	0.008326	0.012980	0.015338	0.018948	0.010194
Gerezani	-6.824023	39.274660	0.000134	0.000263	0.000043	0.000239	0.000215	0.000170	0.000967	0.000290

Goba	-6.728786	39.152650	0.005068	0.006971	0.007367	0.012811	0.014253	0.015640	0.022293	0.012057
Gongo la Mboto	-6.876498	39.148867	0.000844	0.002653	0.001227	0.003012	0.002712	0.004007	0.007995	0.003207
Hananasif	-6.793984	39.268754	0.000856	0.001835	0.001508	0.002407	0.002251	0.002660	0.005477	0.002428
Ilala	-6.825771	39.258696	0.000797	0.001410	0.001352	0.001897	0.001922	0.002649	0.004855	0.002126
Jangwani	-6.813892	39.272524	0.000297	0.000709	0.000575	0.000918	0.000954	0.000789	0.002570	0.000973
Kariakoo	-6.818159	39.274754	0.000328	0.000456	0.000487	0.000662	0.000683	0.001027	0.001569	0.000745
Kawe	-6.724312	39.224395	0.000170	0.004278	0.001319	0.004047	0.000547	0.000646	0.016575	0.003940
Keko	-6.833888	39.274664	0.001022	0.001909	0.002239	0.002114	0.004284	0.003938	0.006013	0.003074
Kibada	-6.889878	39.332898	0.000486	0.001145	0.000941	0.001733	0.002732	0.002767	0.003287	0.001870
Kibamba	-6.770341	39.038250	0.000571	0.000598	0.002583	0.003170	0.003671	0.002892	0.006184	0.002810
Kiburugwa	-6.902563	39.251786	0.001922	0.003125	0.002569	0.006700	0.007455	0.007551	0.008969	0.005470
Kigamboni	-6.825343	39.308222	0.001128	0.000835	0.001930	0.003095	0.003840	0.003025	0.006828	0.002954
Kigogo	-6.816524	39.244814	0.001064	0.002601	0.001833	0.002981	0.002887	0.003412	0.008959	0.003391
Kijichi	-6.887289	39.292058	0.002378	0.001993	0.004608	0.006034	0.009171	0.006021	0.016306	0.006644
Kijitonyama	-6.775708	39.235361	0.001082	0.002041	0.002013	0.003089	0.002921	0.003452	0.009958	0.003508
Kilakala	-6.869738	39.242693	0.001547	0.002736	0.002623	0.003450	0.003729	0.005141	0.009422	0.004093
Kimanga	-6.822777	39.188109	0.001805	0.002837	0.002998	0.004294	0.004973	0.005876	0.009772	0.004651
Kimara	-6.799975	39.169077	0.001170	0.005884	0.001814	0.005566	0.003008	0.000889	0.022798	0.005875
Kimbiji	-7.000497	39.509611	0.000255	0.000360	0.000464	0.000727	0.000983	0.001064	0.002069	0.000846
Kinondoni	-6.782747	39.269260	0.000389	0.001192	0.000829	0.001272	0.001250	0.001477	0.004317	0.001533
Kinyerezi	-6.840029	39.149602	0.001632	0.003421	0.002636	0.002589	0.004372	0.005166	0.008836	0.004093
Kipawa	-6.868857	39.199513	0.002113	0.004152	0.000683	0.003770	0.003396	0.002675	0.015254	0.004578
Kisarawe II	-6.960348	39.408005	0.000902	0.001199	0.001640	0.002641	0.003345	0.004585	0.006385	0.002957
Kisutu	-6.813745	39.284277	0.000130	0.000409	0.000189	0.000464	0.000418	0.000618	0.001233	0.000495
Kitunda	-6.907967	39.209040	0.001532	0.002710	0.002599	0.003646	0.003694	0.005093	0.009333	0.004087
Kivukoni	-6.808407	39.290719	0.000079	0.000188	0.000183	0.000262	0.000253	0.000329	0.000682	0.000282
Kivule	-6.927940	39.180935	0.003125	0.004161	0.003206	0.006559	0.004136	0.009076	0.014927	0.006456
Kiwalani	-6.857929	39.230932	0.001450	0.002279	0.002408	0.003449	0.003994	0.004719	0.007848	0.003735
Kunduchi	-6.658542	39.197554	0.001309	0.004458	0.004228	0.004152	0.004908	0.005800	0.015353	0.005744
Kurasini	-6.843023	39.288212	0.000364	0.000616	0.000889	0.000932	0.001349	0.001381	0.002423	0.001136
Kwembe	-6.818573	39.081068	0.002953	0.004835	0.005405	0.006830	0.008963	0.011059	0.014432	0.007782
Mabibo	-6.807635	39.224743	0.002519	0.003629	0.005289	0.005992	0.008771	0.008770	0.017046	0.007431
Mabwepande	-6.659630	39.088175	0.001745	0.003741	0.003075	0.004907	0.004589	0.005423	0.011166	0.004949
Magomeni	-6.801897	39.260708	0.000040	0.001017	0.000313	0.000962	0.000130	0.000154	0.003939	0.000936
Majohe	-6.949138	39.121173	0.002936	0.006154	0.004742	0.004657	0.007864	0.009293	0.015896	0.007363
Makangarawe	-6.879339	39.246794	0.001795	0.003214	0.003141	0.003856	0.006411	0.006156	0.009449	0.004860
Makongo	-6.757706	39.194932	0.001496	0.002057	0.002174	0.003781	0.004207	0.004616	0.006580	0.003559
Makuburi	-6.806585	39.199203	0.000850	0.000891	0.003846	0.004721	0.005467	0.004307	0.009209	0.004185
Makumbusho	-6.787558	39.249937	0.001467	0.003322	0.002560	0.003840	0.003302	0.003902	0.011918	0.004330
Makurumla	-6.803802	39.241701	0.001222	0.002989	0.002896	0.004071	0.003492	0.004127	0.011765	0.004366
Manzese	-6.794179	39.230471	0.001257	0.004178	0.003132	0.005127	0.004733	0.005593	0.015167	0.005598
Mbagala	-6.896447	39.263374	0.001604	0.002996	0.002703	0.003318	0.004856	0.006180	0.009438	0.004442
Mbagala Kuu	-6.905361	39.281519	0.001681	0.002734	0.002248	0.005863	0.006523	0.006607	0.007848	0.004786
Mbezi	-6.740341	39.091404	0.001891	0.006440	0.006107	0.005998	0.007090	0.008379	0.022179	0.008298

Mbezi juu	-6.722866	39.202515	0.000944	0.003391	0.001045	0.003207	0.001733	0.000512	0.013138	0.003424
Mburahati	-6.810558	39.241213	0.000725	0.001554	0.001278	0.002039	0.001907	0.002254	0.004640	0.002057
Mbweni	-6.592090	39.137856	0.000058	0.001459	0.000450	0.001380	0.000186	0.000220	0.005654	0.001344
Mchafukoge	-6.820901	39.281666	0.000229	0.000450	0.000074	0.000409	0.000368	0.000290	0.001653	0.000496
Mchikichini	-6.817147	39.264479	0.000410	0.001290	0.000596	0.001464	0.001319	0.001948	0.003887	0.001559
Mianzini	-6.932836	39.261971	0.002556	0.002143	0.004953	0.006486	0.009858	0.006472	0.017526	0.007142
Miburani	-6.852302	39.272801	0.001139	0.002014	0.001931	0.002540	0.002745	0.003785	0.006936	0.003013
Mikocheni	-6.762813	39.244308	0.000612	0.001250	0.001067	0.001688	0.001691	0.001998	0.004768	0.001868
Mjimwema	-6.860836	39.357034	0.001900	0.002589	0.003536	0.003617	0.005701	0.007218	0.007545	0.004587
Msasani	-6.759848	39.273613	0.000952	0.002213	0.002207	0.003103	0.002928	0.003460	0.009527	0.003484
Msigani	-6.800745	39.115798	0.002517	0.002739	0.004128	0.006910	0.004979	0.007354	0.016773	0.006486
Msongola	-7.011977	39.143508	0.003169	0.005604	0.005374	0.007539	0.007639	0.010532	0.019301	0.008451
Mtoni	-6.867840	39.278656	0.001581	0.002676	0.003865	0.004050	0.005862	0.006004	0.010533	0.004939
Mwananyamala	-6.784754	39.257756	0.001163	0.002326	0.001885	0.002917	0.002582	0.003051	0.009957	0.003412
Mzimuni	-6.808747	39.256431	0.000300	0.001022	0.000969	0.000952	0.001125	0.001330	0.003520	0.001317
Ndugumbi	-6.799150	39.247407	0.000971	0.002082	0.001712	0.002732	0.002555	0.003019	0.006216	0.002755
Pembamnazi	-7.095698	39.472534	0.000496	0.000523	0.000880	0.001411	0.001556	0.001379	0.002949	0.001314
Pugu	-6.896464	39.119412	0.001197	0.002861	0.003016	0.003988	0.004233	0.005002	0.010371	0.004381
Sandali	-6.853314	39.245984	0.001754	0.002758	0.002695	0.003309	0.005502	0.005282	0.008109	0.004201
Saranga	-6.788181	39.145984	0.005328	0.007329	0.007745	0.013469	0.014986	0.016444	0.023439	0.012677
Segerea	-6.839944	39.196793	0.001753	0.002334	0.002199	0.003680	0.003978	0.005092	0.008375	0.003916
Sinza	-6.781629	39.221924	0.000091	0.002284	0.000704	0.002160	0.000292	0.000345	0.008848	0.002103
Somangila	-6.908111	39.451088	0.001575	0.001688	0.002544	0.003407	0.004603	0.006889	0.008399	0.004158
Tabata	-6.826313	39.224188	0.001649	0.002592	0.002739	0.003923	0.004543	0.005368	0.008927	0.004249
Tandale	-6.792006	39.241567	0.001132	0.002596	0.002149	0.003536	0.003412	0.004032	0.008685	0.003649
Tandika	-6.865387	39.255053	0.001394	0.002699	0.002349	0.002883	0.004220	0.005370	0.008201	0.003873
Temeke	-6.847941	39.254696	0.000616	0.001001	0.000823	0.002146	0.002388	0.002419	0.002873	0.001752
Toangoma	-6.931747	39.315519	0.004116	0.003451	0.007978	0.010446	0.015877	0.010424	0.028229	0.011503
Tungi	-6.833454	39.322478	0.000859	0.001595	0.001846	0.002972	0.003513	0.002965	0.007185	0.002991
Ubungo	-6.782291	39.205799	0.000787	0.000825	0.003560	0.004370	0.005060	0.003986	0.008523	0.003873
Ukonga	-6.874333	39.170738	0.001724	0.003613	0.002784	0.002734	0.004618	0.005457	0.009334	0.004323
Upanga Magharibi	-6.802382	39.273508	0.000295	0.000580	0.000095	0.000527	0.000474	0.000374	0.002131	0.000639
Upanga Mashariki	-6.804820	39.280842	0.000169	0.000532	0.000246	0.000603	0.000543	0.000803	0.001602	0.000643
Vijibweni	-6.860249	39.318021	0.002253	0.004065	0.004654	0.005712	0.008905	0.007717	0.013000	0.006615
Vingunguti	-6.843309	39.227454	0.002817	0.004981	0.004777	0.006701	0.006790	0.009362	0.017156	0.007512
Wazo	-6.677505	39.156571	0.003687	0.008346	0.005002	0.010175	0.009480	0.011203	0.029941	0.011119
Yombo Vituka	-6.877826	39.226253	0.002978	0.005267	0.005051	0.006643	0.007179	0.009898	0.018139	0.007879

AVERAGE HOUSEHOLD SIZE (AHHS) 2012

Ward_Name	**Lat**	**Long**	**PwFa**	**LGBy**	**PerAt**	**ExWV**	**EnvAw**	**Demog**	**SitFA**	**AHHS**
Azimio	-6.873111	39.263651	0.062827	0.148145	0.121772	0.366224	0.353413	0.357969	0.425202	0.262222
Buguruni	-6.829557	39.244077	0.112920	0.177507	0.187594	0.268659	0.311112	0.367644	0.611372	0.290973
Bunju	-6.626190	39.128864	0.052215	0.177841	0.168670	0.165639	0.195810	0.231390	0.612521	0.229155
Buza	-6.891646	39.238482	0.147942	0.109441	0.253005	0.248459	0.503511	0.330557	0.895224	0.355448

Chamazi	-6.955001	39.219140	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Chang'ombe	-6.839403	39.263702	0.110373	0.144141	0.236961	0.282799	0.436649	0.354744	0.643550	0.315602
Chanika	-7.015876	39.083951	0.101882	0.213543	0.164556	0.161599	0.272906	0.322495	0.551614	0.255514
Charambe	-6.919858	39.250934	0.123957	0.192188	0.181012	0.262599	0.409358	0.483742	0.597582	0.321491
Gerezani	-6.824023	39.274660	0.112071	0.220216	0.036202	0.199979	0.180118	0.141898	0.809034	0.242788
Goba	-6.728786	39.152650	0.142635	0.196192	0.207341	0.360568	0.401171	0.440205	0.627461	0.339368
Gongo la Mboto	-6.876498	39.148867	0.067922	0.213543	0.098734	0.242399	0.218324	0.322495	0.643550	0.258138
Hananasif	-6.793984	39.268754	0.086388	0.185181	0.152214	0.242904	0.227194	0.268477	0.552763	0.245017
Ilala	-6.825771	39.258696	0.146031	0.258253	0.247657	0.347438	0.352048	0.485355	0.889478	0.389466
Jangwani	-6.813892	39.272524	0.089147	0.213009	0.172784	0.275729	0.286551	0.237034	0.772260	0.292359
Kariakoo	-6.818159	39.274754	0.155158	0.215211	0.229967	0.312695	0.322711	0.485355	0.741231	0.351761
Kawe	-6.724312	39.224395	0.008490	0.213543	0.065822	0.201999	0.027291	0.032249	0.827421	0.196688
Keko	-6.833888	39.274664	0.111306	0.207937	0.243872	0.230279	0.466668	0.428918	0.655042	0.334860
Kibada	-6.889878	39.332898	0.069620	0.164161	0.134936	0.248459	0.391619	0.396669	0.471170	0.268091
Kibamba	-6.770341	39.038250	0.053488	0.056055	0.241898	0.296939	0.343861	0.270896	0.579195	0.263190
Kiburugwa	-6.902563	39.251786	0.093562	0.152149	0.125063	0.326229	0.362964	0.367644	0.436694	0.266329
Kigamboni	-6.825343	39.308222	0.144333	0.106771	0.246834	0.395918	0.491230	0.386994	0.873389	0.377924
Kigogo	-6.816524	39.244814	0.074501	0.182179	0.128354	0.208766	0.202223	0.238969	0.627461	0.237493
Kijichi	-6.887289	39.292058	0.130537	0.109441	0.253005	0.331279	0.503511	0.330557	0.895224	0.364793
Kijitonyama	-6.775708	39.235361	0.082779	0.156153	0.154025	0.236339	0.223510	0.264123	0.761917	0.268407
Kilakala	-6.869738	39.242693	0.125655	0.222218	0.213100	0.280274	0.302925	0.417631	0.765364	0.332452
Kimanga	-6.822777	39.188109	0.121834	0.191521	0.202404	0.289869	0.335674	0.396669	0.659638	0.313944
Kimara	-6.799975	39.169077	0.043512	0.218881	0.067468	0.207049	0.111891	0.033056	0.848107	0.218566
Kimbiji	-7.000497	39.509611	0.087025	0.123121	0.158550	0.248459	0.335674	0.363613	0.706755	0.289028
Kinondoni	-6.782747	39.269260	0.064525	0.197794	0.137569	0.211089	0.207408	0.245096	0.716179	0.254237
Kinyerezi	-6.840029	39.149602	0.112071	0.234897	0.181012	0.177759	0.300196	0.354744	0.606775	0.281065
Kipawa	-6.868857	39.199513	0.101882	0.200196	0.032911	0.181799	0.163743	0.128998	0.735485	0.220717
Kisarawe II	-6.960348	39.408005	0.107613	0.143140	0.195740	0.315119	0.399124	0.547112	0.761917	0.352824
Kisutu	-6.813745	39.284277	0.062827	0.197527	0.091329	0.224219	0.201950	0.298308	0.595283	0.238778
Kitunda	-6.907967	39.209040	0.149427	0.264259	0.253416	0.355518	0.360235	0.496642	0.910163	0.398523
Kivukoni	-6.808407	39.290719	0.084902	0.202865	0.197467	0.282799	0.272906	0.354744	0.735485	0.304453
Kivule	-6.927940	39.180935	0.158767	0.211407	0.162911	0.333299	0.210137	0.461168	0.758469	0.328022
Kiwalani	-6.857929	39.230932	0.109948	0.172836	0.182657	0.261589	0.302925	0.357969	0.595283	0.283315
Kunduchi	-6.658542	39.197554	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Kurasini	-6.843023	39.288212	0.104854	0.177507	0.256378	0.268659	0.388890	0.398281	0.698711	0.327612
Kwembe	-6.818573	39.081068	0.125315	0.205201	0.229391	0.289869	0.380430	0.469391	0.612521	0.330303
Mabibo	-6.807635	39.224743	0.099335	0.143140	0.208575	0.236339	0.345908	0.345876	0.672280	0.293065
Mabwepande	-6.659630	39.088175	0.088723	0.190186	0.156328	0.249469	0.233334	0.275733	0.567703	0.251639
Magomeni	-6.801897	39.260708	0.008066	0.202865	0.062531	0.191899	0.025926	0.030637	0.786050	0.186854
Majohe	-6.949138	39.121173	0.106976	0.224220	0.172784	0.169679	0.286551	0.338620	0.579195	0.268289
Makangarawe	-6.879339	39.246794	0.119202	0.213409	0.208575	0.256034	0.425733	0.408762	0.627461	0.322739
Makongo	-6.757706	39.194932	0.146031	0.200864	0.212277	0.369153	0.410723	0.450686	0.642400	0.347448
Makuburi	-6.806585	39.199203	0.048394	0.050716	0.218860	0.268659	0.311112	0.245096	0.524033	0.238124
Makumbusho	-6.787558	39.249937	0.078534	0.177774	0.136993	0.205534	0.176706	0.208815	0.637804	0.231737

Makurumla	-6.803802	39.241701	0.072591	0.177507	0.171961	0.241793	0.207408	0.245096	0.698711	0.259295
Manzese	-6.794179	39.230471	0.054974	0.182712	0.136993	0.224219	0.206999	0.244612	0.663316	0.244832
Mbagala	-6.896447	39.263374	0.111306	0.207937	0.187594	0.230279	0.337038	0.428918	0.655042	0.308302
Mbagala Kuu	-6.905361	39.281519	0.096024	0.156153	0.128354	0.334814	0.372516	0.377319	0.448186	0.273338
Mbezi	-6.740341	39.091404	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Mbezi juu	-6.722866	39.202515	0.062403	0.224220	0.069114	0.212099	0.114620	0.033862	0.868792	0.226444
Mburahati	-6.810558	39.241213	0.091057	0.195191	0.160442	0.256034	0.239475	0.282989	0.582642	0.258262
Mbweni	-6.592090	39.137856	0.008915	0.224220	0.069114	0.212099	0.028655	0.033862	0.868792	0.206522
Mchafukoge	-6.820901	39.281666	0.099335	0.195191	0.032088	0.177254	0.159650	0.125773	0.717098	0.215199
Mchikichini	-6.817147	39.264479	0.066224	0.208204	0.096265	0.236339	0.212866	0.314432	0.627461	0.251685
Mianzini	-6.932836	39.261971	0.127353	0.106771	0.246834	0.323199	0.491230	0.322495	0.873389	0.355896
Miburani	-6.852302	39.272801	0.135843	0.240235	0.230379	0.302999	0.327487	0.451493	0.827421	0.359408
Mikocheni	-6.762813	39.244308	0.084902	0.173503	0.148101	0.234319	0.234699	0.277346	0.661937	0.259258
Mjimwema	-6.860836	39.357034	0.127353	0.173503	0.236961	0.242399	0.382068	0.483742	0.505646	0.307382
Msasani	-6.759848	39.273613	0.076157	0.176973	0.176486	0.248156	0.234153	0.276701	0.761917	0.278649
Msigani	-6.800745	39.115798	0.118650	0.129127	0.194588	0.325724	0.234699	0.346682	0.790647	0.305731
Msongola	-7.011977	39.143508	0.146031	0.258253	0.247657	0.347438	0.352048	0.485355	0.889478	0.389466
Mtoni	-6.867840	39.278656	0.102095	0.172836	0.249632	0.261589	0.378656	0.387800	0.680324	0.318990
Mwananyamala	-6.784754	39.257756	0.086388	0.172836	0.140037	0.216745	0.191853	0.226714	0.739852	0.253489
Mzimuni	-6.808747	39.256431	0.052215	0.177841	0.168670	0.165639	0.195810	0.231390	0.612521	0.229155
Ndugumbi	-6.799150	39.247407	0.086388	0.185181	0.152214	0.242904	0.227194	0.268477	0.552763	0.245017
Pembamnazi	-7.095698	39.472534	0.142720	0.150481	0.253005	0.405816	0.447565	0.396669	0.848107	0.377766
Pugu	-6.896464	39.119412	0.089147	0.213009	0.224619	0.296939	0.315206	0.372481	0.772260	0.326237
Sandali	-6.853314	39.245984	0.132277	0.207937	0.203227	0.249469	0.414816	0.398281	0.611372	0.316769
Saranga	-6.788181	39.145984	0.142635	0.196192	0.207341	0.360568	0.401171	0.440205	0.627461	0.339368
Segerea	-6.839944	39.196793	0.155158	0.206602	0.194588	0.325724	0.352048	0.450686	0.741231	0.346577
Sinza	-6.781629	39.221924	0.008702	0.218881	0.067468	0.207049	0.027973	0.033056	0.848107	0.201605
Somangila	-6.908111	39.451088	0.114872	0.123121	0.185537	0.248459	0.335674	0.502447	0.612521	0.303233
Tabata	-6.826313	39.224188	0.112920	0.177507	0.187594	0.268659	0.311112	0.367644	0.611372	0.290973
Tandale	-6.792006	39.241567	0.073355	0.168165	0.139214	0.229067	0.221053	0.261221	0.562646	0.236389
Tandika	-6.865387	39.255053	0.108377	0.209872	0.182657	0.224219	0.328169	0.417631	0.637804	0.301247
Temeke	-6.847941	39.254696	0.096024	0.156153	0.128354	0.334814	0.372516	0.377319	0.448186	0.273338
Toangoma	-6.931747	39.315519	0.136904	0.114779	0.265347	0.347438	0.528072	0.346682	0.938893	0.382588
Tungi	-6.833454	39.322478	0.098062	0.182179	0.210796	0.339358	0.401171	0.338620	0.820526	0.341530
Ubungo	-6.782291	39.205799	0.048394	0.050716	0.218860	0.268659	0.311112	0.245096	0.524033	0.238124
Ukonga	-6.874333	39.170738	0.104429	0.218881	0.168670	0.165639	0.279728	0.330557	0.565404	0.261901
Upanga Magharibi	-6.802382	39.273508	0.101882	0.200196	0.032911	0.181799	0.163743	0.128998	0.735485	0.220717
Upanga Mashariki	-6.804820	39.280842	0.067922	0.213543	0.098734	0.242399	0.218324	0.322495	0.643550	0.258138
Vijibweni	-6.860249	39.318021	0.106170	0.191521	0.219271	0.269164	0.419592	0.363613	0.612521	0.311693
Vingunguti	-6.843309	39.227454	0.125655	0.222218	0.213100	0.298959	0.302925	0.417631	0.765364	0.335122
Wazo	-6.677505	39.156571	0.084902	0.192188	0.115189	0.234319	0.218324	0.257996	0.689517	0.256062
Yombo Vituka	-6.877826	39.226253	0.135843	0.240235	0.230379	0.302999	0.327487	0.451493	0.827421	0.359408

BUILT ENVIRONMENT 2012

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	BE
Azimio	-6.873111	39.263651	0.000003	0.000007	0.000005	0.000016	0.000016	0.000016	0.000019	0.000012
Buguruni	-6.829557	39.244077	0.000007	0.000011	0.000011	0.000016	0.000019	0.000022	0.000037	0.000018
Bunju	-6.626190	39.128864	0.000003	0.000009	0.000008	0.000008	0.000009	0.000011	0.000030	0.000011
Buza	-6.891646	39.238482	0.000006	0.000005	0.000011	0.000011	0.000021	0.000014	0.000038	0.000015
Chamazi	-6.955001	39.219140	0.000013	0.000022	0.000021	0.000030	0.000031	0.000042	0.000077	0.000034
Chang'ombe	-6.839403	39.263702	0.000046	0.000060	0.000099	0.000118	0.000183	0.000148	0.000269	0.000132
Chanika	-7.015876	39.083951	0.000007	0.000015	0.000012	0.000012	0.000019	0.000023	0.000039	0.000018
Charambe	-6.919858	39.250934	0.000006	0.000009	0.000008	0.000012	0.000019	0.000022	0.000027	0.000015
Gerezani	-6.824023	39.274660	0.000007	0.000014	0.000002	0.000013	0.000012	0.000009	0.000053	0.000016
Goba	-6.728786	39.152650	0.000021	0.000028	0.000030	0.000052	0.000058	0.000064	0.000091	0.000049
Gongo la Mboto	-6.876498	39.148867	0.000005	0.000015	0.000007	0.000017	0.000015	0.000022	0.000044	0.000018
Hananasif	-6.793984	39.268754	0.000035	0.000075	0.000062	0.000099	0.000092	0.000109	0.000225	0.000100
Ilala	-6.825771	39.258696	0.000101	0.000178	0.000171	0.000240	0.000243	0.000335	0.000615	0.000269
Jangwani	-6.813892	39.272524	0.000151	0.000360	0.000292	0.000466	0.000485	0.000401	0.001306	0.000494
Kariakoo	-6.818159	39.274754	0.000080	0.000111	0.000118	0.000161	0.000166	0.000249	0.000381	0.000181
Kawe	-6.724312	39.224395	0.000008	0.000212	0.000065	0.000201	0.000027	0.000032	0.000821	0.000195
Keko	-6.833888	39.274664	0.000101	0.000189	0.000221	0.000209	0.000424	0.000389	0.000595	0.000304
Kibada	-6.889878	39.332898	0.000088	0.000207	0.000170	0.000314	0.000494	0.000501	0.000595	0.000338
Kibamba	-6.770341	39.038250	0.000015	0.000015	0.000066	0.000081	0.000094	0.000074	0.000158	0.000072
Kiburugwa	-6.902563	39.251786	0.000004	0.000007	0.000006	0.000014	0.000016	0.000016	0.000019	0.000012
Kigamboni	-6.825343	39.308222	0.000009	0.000007	0.000016	0.000026	0.000032	0.000025	0.000057	0.000025
Kigogo	-6.816524	39.244814	0.000010	0.000023	0.000017	0.000027	0.000026	0.000031	0.000081	0.000031
Kijichi	-6.887289	39.292058	0.000019	0.000016	0.000036	0.000048	0.000072	0.000048	0.000129	0.000052
Kijitonyama	-6.775708	39.235361	0.000044	0.000083	0.000082	0.000125	0.000119	0.000140	0.000404	0.000142
Kilakala	-6.869738	39.242693	0.000039	0.000068	0.000065	0.000086	0.000093	0.000128	0.000235	0.000102
Kimanga	-6.822777	39.188109	0.000260	0.000409	0.000432	0.000619	0.000717	0.000847	0.001408	0.000670
Kimara	-6.799975	39.169077	0.000003	0.000015	0.000005	0.000014	0.000007	0.000002	0.000057	0.000015
Kimbiji	-7.000497	39.509611	0.000083	0.000117	0.000150	0.000236	0.000319	0.000345	0.000671	0.000274
Kinondoni	-6.782747	39.269260	0.000154	0.000473	0.000329	0.000505	0.000496	0.000586	0.001713	0.000608
Kinyerezi	-6.840029	39.149602	0.000056	0.000118	0.000091	0.000089	0.000150	0.000177	0.000304	0.000141
Kipawa	-6.868857	39.199513	0.000034	0.000067	0.000011	0.000061	0.000054	0.000043	0.000245	0.000073
Kisarawe II	-6.960348	39.408005	0.000075	0.000100	0.000137	0.000221	0.000280	0.000384	0.000534	0.000247
Kisutu	-6.813745	39.284277	0.000133	0.000418	0.000193	0.000474	0.000427	0.000631	0.001259	0.000505
Kitunda	-6.907967	39.209040	0.000272	0.000481	0.000461	0.000647	0.000656	0.000904	0.001657	0.000726
Kivukoni	-6.808407	39.290719	0.000032	0.000076	0.000074	0.000105	0.000102	0.000132	0.000274	0.000113
Kivule	-6.927940	39.180935	0.000167	0.000223	0.000172	0.000352	0.000222	0.000486	0.000800	0.000346
Kiwalani	-6.857929	39.230932	0.000291	0.000457	0.000483	0.000691	0.000801	0.000946	0.001573	0.000749
Kunduchi	-6.658542	39.197554	0.000009	0.000029	0.000027	0.000027	0.000032	0.000038	0.000100	0.000037
Kurasini	-6.843023	39.288212	0.000088	0.000150	0.000216	0.000226	0.000328	0.000336	0.000589	0.000276
Kwembe	-6.818573	39.081068	0.000010	0.000016	0.000018	0.000023	0.000030	0.000037	0.000048	0.000026
Mabibo	-6.807635	39.224743	0.000006	0.000009	0.000014	0.000015	0.000022	0.000022	0.000044	0.000019
Mabwepande	-6.659630	39.088175	0.000016	0.000034	0.000028	0.000044	0.000041	0.000049	0.000101	0.000045

Magomeni	-6.801897	39.260708	0.000005	0.000126	0.000039	0.000119	0.000016	0.000019	0.000487	0.000116
Majohe	-6.949138	39.121173	0.000013	0.000028	0.000021	0.000021	0.000035	0.000042	0.000072	0.000033
Makangarawe	-6.879339	39.246794	0.000002	0.000003	0.000003	0.000004	0.000007	0.000007	0.000010	0.000005
Makongo	-6.757706	39.194932	0.000003	0.000005	0.000005	0.000008	0.000009	0.000010	0.000014	0.000008
Makuburi	-6.806585	39.199203	0.000002	0.000002	0.000007	0.000009	0.000010	0.000008	0.000017	0.000008
Makumbusho	-6.787558	39.249937	0.000001	0.000003	0.000002	0.000004	0.000003	0.000004	0.000011	0.000004
Makurumla	-6.803802	39.241701	0.000002	0.000006	0.000006	0.000008	0.000007	0.000008	0.000024	0.000009
Manzese	-6.794179	39.230471	0.000003	0.000011	0.000008	0.000013	0.000012	0.000014	0.000039	0.000014
Mbagala	-6.896447	39.263374	0.000009	0.000016	0.000015	0.000018	0.000026	0.000033	0.000051	0.000024
Mbagala Kuu	-6.905361	39.281519	0.000009	0.000014	0.000012	0.000031	0.000034	0.000035	0.000041	0.000025
Mbezi	-6.740341	39.091404	0.000008	0.000028	0.000027	0.000027	0.000031	0.000037	0.000098	0.000037
Mbezi juu	-6.722866	39.202515	0.000022	0.000078	0.000024	0.000073	0.000040	0.000012	0.000301	0.000078
Mburahati	-6.810558	39.241213	0.000069	0.000148	0.000122	0.000194	0.000181	0.000214	0.000441	0.000196
Mbweni	-6.592090	39.137856	0.000019	0.000472	0.000145	0.000446	0.000060	0.000071	0.001828	0.000435
Mchafukoge	-6.820901	39.281666	0.000096	0.000188	0.000031	0.000171	0.000154	0.000121	0.000691	0.000207
Mchikichini	-6.817147	39.264479	0.000032	0.000099	0.000046	0.000112	0.000101	0.000150	0.000299	0.000120
Mianzini	-6.932836	39.261971	0.000278	0.000233	0.000538	0.000705	0.001071	0.000703	0.001904	0.000776
Miburani	-6.852302	39.272801	0.000048	0.000084	0.000081	0.000106	0.000115	0.000158	0.000290	0.000126
Mikocheni	-6.762813	39.244308	0.000015	0.000032	0.000027	0.000043	0.000043	0.000050	0.000120	0.000047
Mjimwema	-6.860836	39.357034	0.000057	0.000078	0.000107	0.000109	0.000172	0.000218	0.000228	0.000139
Msasani	-6.759848	39.273613	0.000048	0.000112	0.000112	0.000158	0.000149	0.000176	0.000484	0.000177
Msigani	-6.800745	39.115798	0.000581	0.000632	0.000953	0.001595	0.001149	0.001698	0.003872	0.001497
Msongola	-7.011977	39.143508	0.000543	0.000960	0.000921	0.001292	0.001309	0.001805	0.003308	0.001448
Mtoni	-6.867840	39.278656	0.000246	0.000417	0.000602	0.000631	0.000913	0.000935	0.001641	0.000769
Mwananyamala	-6.784754	39.257756	0.000012	0.000023	0.000019	0.000029	0.000026	0.000031	0.000100	0.000034
Mzimuni	-6.808747	39.256431	0.000052	0.000177	0.000168	0.000165	0.000195	0.000230	0.000610	0.000228
Ndugumbi	-6.799150	39.247407	0.000019	0.000042	0.000034	0.000055	0.000051	0.000061	0.000125	0.000055
Pembamnazi	-7.095698	39.472534	0.000039	0.000041	0.000068	0.000109	0.000121	0.000107	0.000229	0.000102
Pugu	-6.896464	39.119412	0.000120	0.000286	0.000302	0.000399	0.000423	0.000500	0.001037	0.000438
Sandali	-6.853314	39.245984	0.000020	0.000032	0.000031	0.000038	0.000064	0.000061	0.000094	0.000049
Saranga	-6.788181	39.145984	0.000015	0.000021	0.000022	0.000038	0.000042	0.000046	0.000066	0.000036
Segerea	-6.839944	39.196793	0.000021	0.000029	0.000027	0.000045	0.000049	0.000062	0.000102	0.000048
Sinza	-6.781629	39.221924	0.000000	0.000012	0.000004	0.000011	0.000001	0.000002	0.000045	0.000011
Somangila	-6.908111	39.451088	0.000024	0.000025	0.000038	0.000051	0.000069	0.000104	0.000127	0.000063
Tabata	-6.826313	39.224188	0.000011	0.000017	0.000018	0.000026	0.000030	0.000035	0.000058	0.000028
Tandale	-6.792006	39.241567	0.000005	0.000012	0.000010	0.000016	0.000016	0.000019	0.000040	0.000017
Tandika	-6.865387	39.255053	0.000012	0.000023	0.000020	0.000025	0.000037	0.000046	0.000071	0.000034
Temeke	-6.847941	39.254696	0.000013	0.000021	0.000017	0.000044	0.000049	0.000050	0.000059	0.000036
Toangoma	-6.931747	39.315519	0.000031	0.000026	0.000061	0.000080	0.000121	0.000079	0.000215	0.000088
Tungi	-6.833454	39.322478	0.000008	0.000015	0.000018	0.000029	0.000034	0.000029	0.000070	0.000029
Ubungo	-6.782291	39.205799	0.000402	0.000421	0.001816	0.002230	0.002582	0.002034	0.004349	0.001976
Ukonga	-6.874333	39.170738	0.000089	0.000188	0.000145	0.000142	0.000240	0.000283	0.000484	0.000224
Upanga Magharibi	-6.802382	39.273508	0.000024	0.000047	0.000008	0.000043	0.000038	0.000030	0.000173	0.000052
Upanga Mashariki	-6.804820	39.280842	0.000030	0.000095	0.000044	0.000107	0.000097	0.000143	0.000285	0.000114

Vijibweni	-6.860249	39.318021	0.000037	0.000066	0.000076	0.000093	0.000145	0.000126	0.000212	0.000108
Vingunguti	-6.843309	39.227454	0.000020	0.000035	0.000034	0.000048	0.000048	0.000066	0.000122	0.000053
Wazo	-6.677505	39.156571	0.000018	0.000042	0.000025	0.000051	0.000047	0.000056	0.000149	0.000055
Yombo Vituka	-6.877826	39.226253	0.000008	0.000014	0.000013	0.000017	0.000019	0.000026	0.000048	0.000021

HOUSEHOLD NUMBER (HHN) 2012

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	HHN
Azimio	- 6.873111	39.263651	0.001125	0.002654	0.002181	0.006560	0.006331	0.006412	0.007617	0.004697
Buguruni	- 6.829557	39.244077	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Bunju	- 6.626190	39.128864	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Buza	- 6.891646	39.238482	0.002392	0.001769	0.004090	0.004016	0.008139	0.005344	0.014472	0.005746
Chamazi	- 6.955001	39.219140	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Chang'ombe	- 6.839403	39.263702	0.001829	0.002388	0.003926	0.004686	0.007235	0.005878	0.010663	0.005229
Chanika	- 7.015876	39.083951	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Charambe	- 6.919858	39.250934	0.002054	0.003184	0.002999	0.004351	0.006783	0.008015	0.009902	0.005327
Gerezani	- 6.824023	39.274660	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Goba	- 6.728786	39.152650	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Gongo la Mboto	- 6.876498	39.148867	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Hananasif	- 6.793984	39.268754	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Ilala	- 6.825771	39.258696	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Jangwani	- 6.813892	39.272524	0.001407	0.003361	0.002727	0.004351	0.004522	0.003740	0.012187	0.004614
Kariakoo	- 6.818159	39.274754	0.002392	0.003317	0.003545	0.004820	0.004974	0.007481	0.011425	0.005422
Kawe	- 6.724312	39.224395	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Keko	- 6.833888	39.274664	0.001941	0.003627	0.004254	0.004016	0.008139	0.007481	0.011425	0.005840
Kibada	- 6.889878	39.332898	0.001125	0.002654	0.002181	0.004016	0.006331	0.006412	0.007617	0.004334
Kibamba	- 6.770341	39.038250	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Kiburugwa	- 6.902563	39.251786	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Kigamboni	- 6.825343	39.308222	0.002392	0.001769	0.004090	0.006560	0.008139	0.006412	0.014472	0.006262
Kigogo	- 6.816524	39.244814	0.001266	0.003096	0.002181	0.003548	0.003437	0.004061	0.010663	0.004036
Kijichi	- 6.887289	39.292058	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897
Kijitonyama	- 6.775708	39.235361	0.001407	0.002654	0.002618	0.004016	0.003798	0.004489	0.012948	0.004561
Kilakala	- 6.869738	39.242693	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955
Kimanga	- 6.822777	39.188109	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Kimara	- 6.799975	39.169077	0.000703	0.003538	0.001091	0.003347	0.001809	0.000534	0.013710	0.003533
Kimbiji	- 7.000497	39.509611	0.001407	0.001990	0.002563	0.004016	0.005426	0.005878	0.011425	0.004672
Kinondoni	- 6.782747	39.269260	0.001125	0.003450	0.002399	0.003682	0.003618	0.004275	0.012491	0.004434
Kinyerezi	- 6.840029	39.149602	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Kipawa	- 6.868857	39.199513	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Kisarawe II	- 6.960348	39.408005	0.001829	0.002433	0.003326	0.005355	0.006783	0.009298	0.012948	0.005996
Kisutu	- 6.813745	39.284277	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Kitunda	- 6.907967	39.209040	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Kivukoni	- 6.808407	39.290719	0.001407	0.003361	0.003272	0.004686	0.004522	0.005878	0.012187	0.005045
Kivule	- 6.927940	39.180935	0.002392	0.003184	0.002454	0.005021	0.003165	0.006947	0.011425	0.004941
Kiwalani	- 6.857929	39.230932	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075

Kunduchi	- 6.658542	39.197554	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Kurasini	- 6.843023	39.288212	0.001829	0.003096	0.004472	0.004686	0.006783	0.006947	0.012187	0.005714
Kwembe	- 6.818573	39.081068	0.002026	0.003317	0.003708	0.004686	0.006150	0.007588	0.009902	0.005339
Mabibo	- 6.807635	39.224743	0.001688	0.002433	0.003545	0.004016	0.005878	0.005878	0.011425	0.004980
Mabwepande	- 6.659630	39.088175	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Magomeni	- 6.801897	39.260708	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Majohe	- 6.949138	39.121173	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Makangarawe	- 6.879339	39.246794	0.002026	0.003627	0.003545	0.004351	0.007235	0.006947	0.010663	0.005485
Makongo	- 6.757706	39.194932	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Makuburi	- 6.806585	39.199203	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Makumbusho	- 6.787558	39.249937	0.001407	0.003184	0.002454	0.003682	0.003165	0.003740	0.011425	0.004151
Makurumla	- 6.803802	39.241701	0.001266	0.003096	0.002999	0.004217	0.003618	0.004275	0.012187	0.004523
Manzese	- 6.794179	39.230471	0.000985	0.003273	0.002454	0.004016	0.003708	0.004382	0.011882	0.004386
Mbagala	- 6.896447	39.263374	0.001941	0.003627	0.003272	0.004016	0.005878	0.007481	0.011425	0.005377
Mbagala Kuu	- 6.905361	39.281519	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Mbezi	- 6.740341	39.091404	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Mbezi juu	- 6.722866	39.202515	0.000985	0.003538	0.001091	0.003347	0.001809	0.000534	0.013710	0.003573
Mburahati	- 6.810558	39.241213	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Mbweni	- 6.592090	39.137856	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Mchafukoge	- 6.820901	39.281666	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Mchikichini	- 6.817147	39.264479	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Mianzini	- 6.932836	39.261971	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897
Miburani	- 6.852302	39.272801	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955
Mikocheni	- 6.762813	39.244308	0.001407	0.002875	0.002454	0.003883	0.003889	0.004595	0.010968	0.004296
Mjimwema	- 6.860836	39.357034	0.002110	0.002875	0.003926	0.004016	0.006331	0.008015	0.008378	0.005093
Msasani	- 6.759848	39.273613	0.001294	0.003008	0.002999	0.004217	0.003979	0.004702	0.012948	0.004735
Msigani	- 6.800745	39.115798	0.001829	0.001990	0.002999	0.005021	0.003618	0.005344	0.012187	0.004712
Msongola	- 7.011977	39.143508	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Mtoni	- 6.867840	39.278656	0.001829	0.003096	0.004472	0.004686	0.006783	0.006947	0.012187	0.005714
Mwananyamala	- 6.784754	39.257756	0.001547	0.003096	0.002508	0.003883	0.003437	0.004061	0.013253	0.004541
Mzimuni	- 6.808747	39.256431	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Ndugumbi	- 6.799150	39.247407	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Pembamnazi	- 7.095698	39.472534	0.002307	0.002433	0.004090	0.006560	0.007235	0.006412	0.013710	0.006107
Pugu	- 6.896464	39.119412	0.001407	0.003361	0.003545	0.004686	0.004974	0.005878	0.012187	0.005148
Sandali	- 6.853314	39.245984	0.002307	0.003627	0.003545	0.004351	0.007235	0.006947	0.010663	0.005525
Saranga	- 6.788181	39.145984	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Segerea	- 6.839944	39.196793	0.002392	0.003184	0.002999	0.005021	0.005426	0.006947	0.011425	0.005342
Sinza	- 6.781629	39.221924	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Somangila	- 6.908111	39.451088	0.001857	0.001990	0.002999	0.004016	0.005426	0.008122	0.009902	0.004902
Tabata	- 6.826313	39.224188	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Tandale	- 6.792006	39.241567	0.001351	0.003096	0.002563	0.004217	0.004070	0.004809	0.010359	0.004352
Tandika	- 6.865387	39.255053	0.001941	0.003759	0.003272	0.004016	0.005878	0.007481	0.011425	0.005396
Temeke	- 6.847941	39.254696	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Toangoma	- 6.931747	39.315519	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897

Tungi	- 6.833454	39.322478	0.001547	0.002875	0.003326	0.005355	0.006331	0.005344	0.012948	0.005389
Ubungo	- 6.782291	39.205799	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Ukonga	- 6.874333	39.170738	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Upanga Magharibi	- 6.802382	39.273508	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Upanga Mashariki	- 6.804820	39.280842	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Vijibweni	- 6.860249	39.318021	0.001716	0.003096	0.003545	0.004351	0.006783	0.005878	0.009902	0.005039
Vingunguti	- 6.843309	39.227454	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Wazo	- 6.677505	39.156571	0.001407	0.003184	0.001909	0.003883	0.003618	0.004275	0.011425	0.004243
Yombo Vituka	- 6.877826	39.226253	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955

AVERAGE HOUSEHOLD SIZE (AHHS) 2002

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	AHHS
Azimio	-6.873111	39.263651	0.071318	0.168165	0.138227	0.415714	0.401171	0.406343	0.482662	0.297657
Buguruni	-6.829557	39.244077	0.124806	0.196192	0.207341	0.296939	0.343861	0.406343	0.675727	0.321601
Bunju	-6.626190	39.128864	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Buza	-6.891646	39.238482	0.151550	0.112110	0.259176	0.254519	0.515791	0.338620	0.917058	0.364118
Chamazi	-6.955001	39.219140	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Chang'ombe	-6.839403	39.263702	0.115891	0.151348	0.248809	0.296939	0.458481	0.372481	0.675727	0.331382
Chanika	-7.015876	39.083951	0.106976	0.224220	0.172784	0.169679	0.286551	0.338620	0.579195	0.268289
Charambe	-6.919858	39.250934	0.130155	0.201798	0.190062	0.275729	0.429826	0.507929	0.627461	0.337566
Gerezani	-6.824023	39.274660	0.106976	0.210206	0.034557	0.190889	0.171930	0.135448	0.772260	0.231752
Goba	-6.728786	39.152650	0.142635	0.196192	0.207341	0.360568	0.401171	0.440205	0.627461	0.339368
Gongo la Mboto	-6.876498	39.148867	0.071318	0.224220	0.103670	0.254519	0.229241	0.338620	0.675727	0.271045
Hananasif	-6.793984	39.268754	0.098062	0.210206	0.172784	0.275729	0.257896	0.304758	0.627461	0.278128
Ilala	-6.825771	39.258696	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Jangwani	-6.813892	39.272524	0.089147	0.213009	0.172784	0.275729	0.286551	0.237034	0.772260	0.292359
Kariakoo	-6.818159	39.274754	0.151550	0.210206	0.224619	0.305423	0.315206	0.474067	0.723993	0.343581
Kawe	-6.724312	39.224395	0.008915	0.224220	0.069114	0.212099	0.028655	0.033862	0.868792	0.206522
Keko	-6.833888	39.274664	0.123023	0.229825	0.269543	0.254519	0.515791	0.474067	0.723993	0.370109
Kibada	-6.889878	39.332898	0.071318	0.168165	0.138227	0.254519	0.401171	0.406343	0.482662	0.274629
Kibamba	-6.770341	39.038250	0.053488	0.056055	0.241898	0.296939	0.343861	0.270896	0.579195	0.263190
Kiburugwa	-6.902563	39.251786	0.103411	0.168165	0.138227	0.360568	0.401171	0.406343	0.482662	0.294364
Kigamboni	-6.825343	39.308222	0.151550	0.112110	0.259176	0.415714	0.515791	0.406343	0.917058	0.396820
Kigogo	-6.816524	39.244814	0.080232	0.196192	0.138227	0.224825	0.217779	0.257351	0.675727	0.255762
Kijichi	-6.887289	39.292058	0.133721	0.112110	0.259176	0.339358	0.515791	0.338620	0.917058	0.373691
Kijitonyama	-6.775708	39.235361	0.089147	0.168165	0.165873	0.254519	0.240703	0.284440	0.820526	0.289053
Kilakala	-6.869738	39.242693	0.142635	0.252247	0.241898	0.318149	0.343861	0.474067	0.868792	0.377378
Kimanga	-6.822777	39.188109	0.124806	0.196192	0.207341	0.296939	0.343861	0.406343	0.675727	0.321601
Kimara	-6.799975	39.169077	0.044574	0.224220	0.069114	0.212099	0.114620	0.033862	0.868792	0.223897
Kimbiji	-7.000497	39.509611	0.089147	0.126124	0.162417	0.254519	0.343861	0.372481	0.723993	0.296077
Kinondoni	-6.782747	39.269260	0.071318	0.218614	0.152050	0.233309	0.229241	0.270896	0.791566	0.280999
Kinyerezi	-6.840029	39.149602	0.106976	0.224220	0.172784	0.169679	0.286551	0.338620	0.579195	0.268289
Kipawa	-6.868857	39.199513	0.106976	0.210206	0.034557	0.190889	0.171930	0.135448	0.772260	0.231752
Kisarawe II	-6.960348	39.408005	0.115891	0.154151	0.210796	0.339358	0.429826	0.589198	0.820526	0.379964

Kisutu	-6.813745	39.284277	0.071318	0.224220	0.103670	0.254519	0.229241	0.338620	0.675727	0.271045
Kitunda	-6.907967	39.209040	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Kivukoni	-6.808407	39.290719	0.089147	0.213009	0.207341	0.296939	0.286551	0.372481	0.772260	0.319675
Kivule	-6.927940	39.180935	0.151550	0.201798	0.155506	0.318149	0.200586	0.440205	0.723993	0.313112
Kiwalani	-6.857929	39.230932	0.124806	0.196192	0.207341	0.296939	0.343861	0.406343	0.675727	0.321601
Kunduchi	-6.658542	39.197554	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Kurasini	-6.843023	39.288212	0.115891	0.196192	0.283366	0.296939	0.429826	0.440205	0.772260	0.362097
Kwembe	-6.818573	39.081068	0.128372	0.210206	0.234986	0.296939	0.389709	0.480840	0.627461	0.338359
Mabibo	-6.807635	39.224743	0.106976	0.154151	0.224619	0.254519	0.372516	0.372481	0.723993	0.315608
Mabwepande	-6.659630	39.088175	0.098062	0.210206	0.172784	0.275729	0.257896	0.304758	0.627461	0.278128
Magomeni	-6.801897	39.260708	0.008915	0.224220	0.069114	0.212099	0.028655	0.033862	0.868792	0.206522
Majohe	-6.949138	39.121173	0.106976	0.224220	0.172784	0.169679	0.286551	0.338620	0.579195	0.268289
Makangarawe	-6.879339	39.246794	0.128372	0.229825	0.224619	0.275729	0.458481	0.440205	0.675727	0.347566
Makongo	-6.757706	39.194932	0.142635	0.196192	0.207341	0.360568	0.401171	0.440205	0.627461	0.339368
Makuburi	-6.806585	39.199203	0.053488	0.056055	0.241898	0.296939	0.343861	0.270896	0.579195	0.263190
Makumbusho	-6.787558	39.249937	0.089147	0.201798	0.155506	0.233309	0.200586	0.237034	0.723993	0.263053
Makurumla	-6.803802	39.241701	0.080232	0.196192	0.190062	0.267245	0.229241	0.270896	0.772260	0.286590
Manzese	-6.794179	39.230471	0.062403	0.207403	0.155506	0.254519	0.234972	0.277668	0.752953	0.277918
Mbagala	-6.896447	39.263374	0.123023	0.229825	0.207341	0.254519	0.372516	0.474067	0.723993	0.340755
Mbagala Kuu	-6.905361	39.281519	0.103411	0.168165	0.138227	0.360568	0.401171	0.406343	0.482662	0.294364
Mbezi	-6.740341	39.091404	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Mbezi juu	-6.722866	39.202515	0.062403	0.224220	0.069114	0.212099	0.114620	0.033862	0.868792	0.226444
Mburahati	-6.810558	39.241213	0.098062	0.210206	0.172784	0.275729	0.257896	0.304758	0.627461	0.278128
Mbweni	-6.592090	39.137856	0.008915	0.224220	0.069114	0.212099	0.028655	0.033862	0.868792	0.206522
Mchafukoge	-6.820901	39.281666	0.106976	0.210206	0.034557	0.190889	0.171930	0.135448	0.772260	0.231752
Mchikichini	-6.817147	39.264479	0.071318	0.224220	0.103670	0.254519	0.229241	0.338620	0.675727	0.271045
Mianzini	-6.932836	39.261971	0.133721	0.112110	0.259176	0.339358	0.515791	0.338620	0.917058	0.373691
Miburani	-6.852302	39.272801	0.142635	0.252247	0.241898	0.318149	0.343861	0.474067	0.868792	0.377378
Mikocheni	-6.762813	39.244308	0.089147	0.182179	0.155506	0.246035	0.246434	0.291213	0.695034	0.272221
Mjimwema	-6.860836	39.357034	0.133721	0.182179	0.248809	0.254519	0.401171	0.507929	0.530928	0.322751
Msasani	-6.759848	39.273613	0.082015	0.190587	0.190062	0.267245	0.252165	0.297985	0.820526	0.300084
Msigani	-6.800745	39.115798	0.115891	0.126124	0.190062	0.318149	0.229241	0.338620	0.772260	0.298621
Msongola	-7.011977	39.143508	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Mtoni	-6.867840	39.278656	0.115891	0.196192	0.283366	0.296939	0.429826	0.440205	0.772260	0.362097
Mwananyamala	-6.784754	39.257756	0.098062	0.196192	0.158961	0.246035	0.217779	0.257351	0.839832	0.287745
Mzimuni	-6.808747	39.256431	0.053488	0.182179	0.172784	0.169679	0.200586	0.237034	0.627461	0.234744
Ndugumbi	-6.799150	39.247407	0.098062	0.210206	0.172784	0.275729	0.257896	0.304758	0.627461	0.278128
Pembamnazi	-7.095698	39.472534	0.146201	0.154151	0.259176	0.415714	0.458481	0.406343	0.868792	0.386980
Pugu	-6.896464	39.119412	0.089147	0.213009	0.224619	0.296939	0.315206	0.372481	0.772260	0.326237
Sandali	-6.853314	39.245984	0.146201	0.229825	0.224619	0.275729	0.458481	0.440205	0.675727	0.350113
Saranga	-6.788181	39.145984	0.142635	0.196192	0.207341	0.360568	0.401171	0.440205	0.627461	0.339368
Segerea	-6.839944	39.196793	0.151550	0.201798	0.190062	0.318149	0.343861	0.440205	0.723993	0.338517
Sinza	-6.781629	39.221924	0.008915	0.224220	0.069114	0.212099	0.028655	0.033862	0.868792	0.206522
Somangila	-6.908111	39.451088	0.117674	0.126124	0.190062	0.254519	0.343861	0.514702	0.627461	0.310629

Tabata	-6.826313	39.224188	0.124806	0.196192	0.207341	0.296939	0.343861	0.406343	0.675727	0.321601
Tandale	-6.792006	39.241567	0.085581	0.196192	0.162417	0.267245	0.257896	0.304758	0.656421	0.275787
Tandika	-6.865387	39.255053	0.123023	0.238233	0.207341	0.254519	0.372516	0.474067	0.723993	0.341956
Temeke	-6.847941	39.254696	0.103411	0.168165	0.138227	0.360568	0.401171	0.406343	0.482662	0.294364
Toangoma	-6.931747	39.315519	0.133721	0.112110	0.259176	0.339358	0.515791	0.338620	0.917058	0.373691
Tungi	-6.833454	39.322478	0.098062	0.182179	0.210796	0.339358	0.401171	0.338620	0.820526	0.341530
Ubungo	-6.782291	39.205799	0.053488	0.056055	0.241898	0.296939	0.343861	0.270896	0.579195	0.263190
Ukonga	-6.874333	39.170738	0.106976	0.224220	0.172784	0.169679	0.286551	0.338620	0.579195	0.268289
Upanga Magharibi	-6.802382	39.273508	0.106976	0.210206	0.034557	0.190889	0.171930	0.135448	0.772260	0.231752
Upanga Mashariki	-6.804820	39.280842	0.071318	0.224220	0.103670	0.254519	0.229241	0.338620	0.675727	0.271045
Vijibweni	-6.860249	39.318021	0.108759	0.196192	0.224619	0.275729	0.429826	0.372481	0.627461	0.319295
Vingunguti	-6.843309	39.227454	0.142635	0.252247	0.241898	0.339358	0.343861	0.474067	0.868792	0.380408
Wazo	-6.677505	39.156571	0.089147	0.201798	0.120949	0.246035	0.229241	0.270896	0.723993	0.268865
Yombo Vituka	-6.877826	39.226253	0.142635	0.252247	0.241898	0.318149	0.343861	0.474067	0.868792	0.377378

BUILT ENVIRONMENT (BE) 2002

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	BE
Azimio	-6.873111	39.263651	0.000002	0.000005	0.000004	0.000012	0.000012	0.000012	0.000014	0.000009
Buguruni	-6.829557	39.244077	0.000005	0.000008	0.000009	0.000013	0.000015	0.000017	0.000029	0.000014
Bunju	-6.626190	39.128864	0.000002	0.000007	0.000006	0.000006	0.000007	0.000009	0.000023	0.000009
Buza	-6.891646	39.238482	0.000005	0.000004	0.000008	0.000008	0.000016	0.000011	0.000029	0.000012
Chamazi	-6.955001	39.219140	0.000010	0.000017	0.000017	0.000023	0.000024	0.000032	0.000059	0.000026
Chang'ombe	-6.839403	39.263702	0.000036	0.000046	0.000076	0.000091	0.000141	0.000114	0.000207	0.000102
Chanika	-7.015876	39.083951	0.000006	0.000012	0.000009	0.000009	0.000015	0.000018	0.000030	0.000014
Charambe	-6.919858	39.250934	0.000004	0.000007	0.000006	0.000009	0.000014	0.000017	0.000021	0.000011
Gerezani	-6.824023	39.274660	0.000006	0.000011	0.000002	0.000010	0.000009	0.000007	0.000041	0.000012
Goba	-6.728786	39.152650	0.000016	0.000022	0.000023	0.000040	0.000045	0.000049	0.000070	0.000038
Gongo la Mboto	-6.876498	39.148867	0.000004	0.000011	0.000005	0.000013	0.000012	0.000017	0.000034	0.000014
Hananasif	-6.793984	39.268754	0.000027	0.000058	0.000048	0.000076	0.000071	0.000084	0.000173	0.000077
Ilala	-6.825771	39.258696	0.000078	0.000137	0.000132	0.000185	0.000187	0.000258	0.000473	0.000207
Jangwani	-6.813892	39.272524	0.000116	0.000277	0.000225	0.000359	0.000373	0.000309	0.001006	0.000381
Kariakoo	-6.818159	39.274754	0.000061	0.000085	0.000091	0.000124	0.000128	0.000192	0.000293	0.000139
Kawe	-6.724312	39.224395	0.000006	0.000163	0.000050	0.000154	0.000021	0.000025	0.000632	0.000150
Keko	-6.833888	39.274664	0.000078	0.000145	0.000171	0.000161	0.000326	0.000300	0.000458	0.000234
Kibada	-6.889878	39.332898	0.000068	0.000160	0.000131	0.000241	0.000381	0.000386	0.000458	0.000261
Kibamba	-6.770341	39.038250	0.000011	0.000012	0.000051	0.000062	0.000072	0.000057	0.000122	0.000055
Kiburugwa	-6.902563	39.251786	0.000003	0.000005	0.000004	0.000011	0.000012	0.000012	0.000015	0.000009
Kigamboni	-6.825343	39.308222	0.000007	0.000005	0.000012	0.000020	0.000025	0.000019	0.000044	0.000019
Kigogo	-6.816524	39.244814	0.000007	0.000018	0.000013	0.000021	0.000020	0.000024	0.000062	0.000024
Kijichi	-6.887289	39.292058	0.000014	0.000012	0.000028	0.000037	0.000056	0.000037	0.000099	0.000040
Kijitonyama	-6.775708	39.235361	0.000034	0.000064	0.000063	0.000097	0.000091	0.000108	0.000311	0.000110
Kilakala	-6.869738	39.242693	0.000030	0.000053	0.000050	0.000066	0.000072	0.000099	0.000181	0.000079
Kimanga	-6.822777	39.188109	0.000200	0.000315	0.000333	0.000477	0.000552	0.000652	0.001085	0.000516
Kimara	-6.799975	39.169077	0.000002	0.000011	0.000003	0.000011	0.000006	0.000002	0.000044	0.000011

Kimbiji	-7.000497	39.509611	0.000064	0.000090	0.000116	0.000182	0.000245	0.000266	0.000517	0.000211
Kinondoni	-6.782747	39.269260	0.000119	0.000364	0.000253	0.000389	0.000382	0.000451	0.001319	0.000468
Kinyerezi	-6.840029	39.149602	0.000043	0.000090	0.000070	0.000068	0.000116	0.000137	0.000234	0.000108
Kipawa	-6.868857	39.199513	0.000026	0.000051	0.000008	0.000047	0.000042	0.000033	0.000189	0.000057
Kisarawe II	-6.960348	39.408005	0.000058	0.000077	0.000106	0.000170	0.000215	0.000295	0.000411	0.000190
Kisutu	-6.813745	39.284277	0.000102	0.000322	0.000149	0.000365	0.000329	0.000486	0.000969	0.000389
Kitunda	-6.907967	39.209040	0.000210	0.000371	0.000355	0.000498	0.000505	0.000696	0.001276	0.000559
Kivukoni	-6.808407	39.290719	0.000024	0.000058	0.000057	0.000081	0.000078	0.000102	0.000211	0.000087
Kivule	-6.927940	39.180935	0.000129	0.000172	0.000132	0.000271	0.000171	0.000375	0.000616	0.000266
Kiwalani	-6.857929	39.230932	0.000224	0.000352	0.000372	0.000532	0.000616	0.000728	0.001211	0.000577
Kunduchi	-6.658542	39.197554	0.000007	0.000022	0.000021	0.000021	0.000025	0.000029	0.000077	0.000029
Kurasini	-6.843023	39.288212	0.000068	0.000115	0.000166	0.000174	0.000252	0.000258	0.000453	0.000213
Kwembe	-6.818573	39.081068	0.000008	0.000012	0.000014	0.000017	0.000023	0.000028	0.000037	0.000020
Mabibo	-6.807635	39.224743	0.000005	0.000007	0.000010	0.000012	0.000017	0.000017	0.000034	0.000015
Mabwepande	-6.659630	39.088175	0.000012	0.000026	0.000021	0.000034	0.000032	0.000038	0.000078	0.000034
Magomeni	-6.801897	39.260708	0.000004	0.000097	0.000030	0.000091	0.000012	0.000015	0.000375	0.000089
Majohe	-6.949138	39.121173	0.000010	0.000021	0.000016	0.000016	0.000027	0.000032	0.000055	0.000026
Makangarawe	-6.879339	39.246794	0.000001	0.000003	0.000003	0.000003	0.000005	0.000005	0.000008	0.000004
Makongo	-6.757706	39.194932	0.000003	0.000003	0.000004	0.000006	0.000007	0.000008	0.000011	0.000006
Makuburi	-6.806585	39.199203	0.000001	0.000001	0.000005	0.000007	0.000008	0.000006	0.000013	0.000006
Makumbusho	-6.787558	39.249937	0.000001	0.000002	0.000002	0.000003	0.000002	0.000003	0.000009	0.000003
Makurumla	-6.803802	39.241701	0.000002	0.000005	0.000004	0.000006	0.000005	0.000006	0.000018	0.000007
Manzese	-6.794179	39.230471	0.000002	0.000008	0.000006	0.000010	0.000009	0.000011	0.000030	0.000011
Mbagala	-6.896447	39.263374	0.000007	0.000012	0.000011	0.000014	0.000020	0.000026	0.000039	0.000018
Mbagala Kuu	-6.905361	39.281519	0.000007	0.000011	0.000009	0.000024	0.000026	0.000027	0.000032	0.000019
Mbezi	-6.740341	39.091404	0.000006	0.000022	0.000021	0.000020	0.000024	0.000029	0.000076	0.000028
Mbezi juu	-6.722866	39.202515	0.000017	0.000060	0.000018	0.000056	0.000031	0.000009	0.000231	0.000060
Mburahati	-6.810558	39.241213	0.000053	0.000114	0.000094	0.000149	0.000140	0.000165	0.000340	0.000151
Mbweni	-6.592090	39.137856	0.000014	0.000363	0.000112	0.000344	0.000046	0.000055	0.001408	0.000335
Mchafukoge	-6.820901	39.281666	0.000074	0.000145	0.000024	0.000131	0.000118	0.000093	0.000532	0.000160
Mchikichini	-6.817147	39.264479	0.000024	0.000076	0.000035	0.000087	0.000078	0.000115	0.000230	0.000092
Mianzini	-6.932836	39.261971	0.000214	0.000179	0.000414	0.000543	0.000825	0.000541	0.001466	0.000597
Miburani	-6.852302	39.272801	0.000037	0.000065	0.000062	0.000082	0.000088	0.000122	0.000223	0.000097
Mikocheni	-6.762813	39.244308	0.000012	0.000024	0.000021	0.000033	0.000033	0.000039	0.000093	0.000036
Mjimwema	-6.860836	39.357034	0.000044	0.000060	0.000082	0.000084	0.000133	0.000168	0.000176	0.000107
Msasani	-6.759848	39.273613	0.000037	0.000087	0.000086	0.000121	0.000114	0.000135	0.000372	0.000136
Msigani	-6.800745	39.115798	0.000447	0.000487	0.000734	0.001228	0.000885	0.001307	0.002982	0.001153
Msongola	-7.011977	39.143508	0.000418	0.000740	0.000709	0.000995	0.001008	0.001390	0.002547	0.001115
Mtoni	-6.867840	39.278656	0.000190	0.000321	0.000464	0.000486	0.000703	0.000720	0.001263	0.000592
Mwananyamala	-6.784754	39.257756	0.000009	0.000018	0.000015	0.000023	0.000020	0.000024	0.000077	0.000026
Mzimuni	-6.808747	39.256431	0.000040	0.000136	0.000129	0.000127	0.000150	0.000177	0.000470	0.000176
Ndugumbi	-6.799150	39.247407	0.000015	0.000032	0.000026	0.000042	0.000039	0.000047	0.000096	0.000043
Pembamnazi	-7.095698	39.472534	0.000030	0.000031	0.000053	0.000084	0.000093	0.000082	0.000176	0.000078
Pugu	-6.896464	39.119412	0.000092	0.000220	0.000232	0.000307	0.000326	0.000385	0.000798	0.000337

Sandali	-6.853314	39.245984	0.000016	0.000025	0.000024	0.000030	0.000049	0.000047	0.000072	0.000037
Saranga	-6.788181	39.145984	0.000011	0.000016	0.000017	0.000029	0.000032	0.000035	0.000051	0.000027
Segerea	-6.839944	39.196793	0.000016	0.000022	0.000021	0.000035	0.000037	0.000048	0.000079	0.000037
Sinza	-6.781629	39.221924	0.000000	0.000009	0.000003	0.000009	0.000001	0.000001	0.000035	0.000008
Somangila	-6.908111	39.451088	0.000018	0.000020	0.000030	0.000040	0.000053	0.000080	0.000097	0.000048
Tabata	-6.826313	39.224188	0.000008	0.000013	0.000014	0.000020	0.000023	0.000027	0.000045	0.000021
Tandale	-6.792006	39.241567	0.000004	0.000009	0.000008	0.000013	0.000012	0.000014	0.000031	0.000013
Tandika	-6.865387	39.255053	0.000009	0.000018	0.000016	0.000019	0.000028	0.000036	0.000055	0.000026
Temeke	-6.847941	39.254696	0.000010	0.000016	0.000013	0.000034	0.000038	0.000039	0.000046	0.000028
Toangoma	-6.931747	39.315519	0.000024	0.000020	0.000047	0.000061	0.000093	0.000061	0.000165	0.000067
Tungi	-6.833454	39.322478	0.000006	0.000012	0.000014	0.000022	0.000026	0.000022	0.000054	0.000022
Ubungo	-6.782291	39.205799	0.000309	0.000324	0.001399	0.001717	0.001988	0.001566	0.003349	0.001522
Ukonga	-6.874333	39.170738	0.000069	0.000144	0.000111	0.000109	0.000185	0.000218	0.000373	0.000173
Upanga Magharibi	-6.802382	39.273508	0.000018	0.000036	0.000006	0.000033	0.000030	0.000023	0.000133	0.000040
Upanga Mashariki	-6.804820	39.280842	0.000023	0.000073	0.000034	0.000083	0.000074	0.000110	0.000220	0.000088
Vijibweni	-6.860249	39.318021	0.000028	0.000051	0.000058	0.000072	0.000112	0.000097	0.000163	0.000083
Vingunguti	-6.843309	39.227454	0.000015	0.000027	0.000026	0.000037	0.000037	0.000051	0.000094	0.000041
Wazo	-6.677505	39.156571	0.000014	0.000032	0.000019	0.000039	0.000036	0.000043	0.000115	0.000043
Yombo Vituka	-6.877826	39.226253	0.000006	0.000011	0.000010	0.000013	0.000014	0.000020	0.000037	0.000016

HOUSEHOLD NUMBER (HHN) 2002

Ward_Name	Lat	Long	PwFa	LGBy	PerAt	ExWV	EnvAw	Demog	SitFA	HHN
Azimio	-6.873111	39.263651	0.001125	0.002654	0.002181	0.006560	0.006331	0.006412	0.007617	0.004697
Buguruni	-6.829557	39.244077	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Bunju	-6.626190	39.128864	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Buza	-6.891646	39.238482	0.002392	0.001769	0.004090	0.004016	0.008139	0.005344	0.014472	0.005746
Chamazi	-6.955001	39.219140	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Chang'ombe	-6.839403	39.263702	0.001829	0.002388	0.003926	0.004686	0.007235	0.005878	0.010663	0.005229
Chanika	-7.015876	39.083951	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Charambe	-6.919858	39.250934	0.002054	0.003184	0.002999	0.004351	0.006783	0.008015	0.009902	0.005327
Gerezani	-6.824023	39.274660	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Goba	-6.728786	39.152650	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Gongo la Mboto	-6.876498	39.148867	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Hananasif	-6.793984	39.268754	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Ilala	-6.825771	39.258696	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Jangwani	-6.813892	39.272524	0.001407	0.003361	0.002727	0.004351	0.004522	0.003740	0.012187	0.004614
Kariakoo	-6.818159	39.274754	0.002392	0.003317	0.003545	0.004820	0.004974	0.007481	0.011425	0.005422
Kawe	-6.724312	39.224395	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Keko	-6.833888	39.274664	0.001941	0.003627	0.004254	0.004016	0.008139	0.007481	0.011425	0.005840
Kibada	-6.889878	39.332898	0.001125	0.002654	0.002181	0.004016	0.006331	0.006412	0.007617	0.004334
Kibamba	-6.770341	39.038250	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Kiburugwa	-6.902563	39.251786	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Kigamboni	-6.825343	39.308222	0.002392	0.001769	0.004090	0.006560	0.008139	0.006412	0.014472	0.006262
Kigogo	-6.816524	39.244814	0.001266	0.003096	0.002181	0.003548	0.003437	0.004061	0.010663	0.004036

Kijichi	-6.887289	39.292058	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897
Kijitonyama	-6.775708	39.235361	0.001407	0.002654	0.002618	0.004016	0.003798	0.004489	0.012948	0.004561
Kilakala	-6.869738	39.242693	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955
Kimanga	-6.822777	39.188109	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Kimara	-6.799975	39.169077	0.000703	0.003538	0.001091	0.003347	0.001809	0.000534	0.013710	0.003533
Kimbiji	-7.000497	39.509611	0.001407	0.001990	0.002563	0.004016	0.005426	0.005878	0.011425	0.004672
Kinondoni	-6.782747	39.269260	0.001125	0.003450	0.002399	0.003682	0.003618	0.004275	0.012491	0.004434
Kinyerezi	-6.840029	39.149602	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Kipawa	-6.868857	39.199513	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Kisarawe II	-6.960348	39.408005	0.001829	0.002433	0.003326	0.005355	0.006783	0.009298	0.012948	0.005996
Kisutu	-6.813745	39.284277	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Kitunda	-6.907967	39.209040	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Kivukoni	-6.808407	39.290719	0.001407	0.003361	0.003272	0.004686	0.004522	0.005878	0.012187	0.005045
Kivule	-6.927940	39.180935	0.002392	0.003184	0.002454	0.005021	0.003165	0.006947	0.011425	0.004941
Kiwalani	-6.857929	39.230932	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Kunduchi	-6.658542	39.197554	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Kurasini	-6.843023	39.288212	0.001829	0.003096	0.004472	0.004686	0.006783	0.006947	0.012187	0.005714
Kwembe	-6.818573	39.081068	0.002026	0.003317	0.003708	0.004686	0.006150	0.007588	0.009902	0.005339
Mabibo	-6.807635	39.224743	0.001688	0.002433	0.003545	0.004016	0.005878	0.005878	0.011425	0.004980
Mabwepande	-6.659630	39.088175	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Magomeni	-6.801897	39.260708	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Majohe	-6.949138	39.121173	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Makangarawe	-6.879339	39.246794	0.002026	0.003627	0.003545	0.004351	0.007235	0.006947	0.010663	0.005485
Makongo	-6.757706	39.194932	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Makuburi	-6.806585	39.199203	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Makumbusho	-6.787558	39.249937	0.001407	0.003184	0.002454	0.003682	0.003165	0.003740	0.011425	0.004151
Makurumla	-6.803802	39.241701	0.001266	0.003096	0.002999	0.004217	0.003618	0.004275	0.012187	0.004523
Manzese	-6.794179	39.230471	0.000985	0.003273	0.002454	0.004016	0.003708	0.004382	0.011882	0.004386
Mbagala	-6.896447	39.263374	0.001941	0.003627	0.003272	0.004016	0.005878	0.007481	0.011425	0.005377
Mbagala Kuu	-6.905361	39.281519	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Mbezi	-6.740341	39.091404	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Mbezi juu	-6.722866	39.202515	0.000985	0.003538	0.001091	0.003347	0.001809	0.000534	0.013710	0.003573
Mburahati	-6.810558	39.241213	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Mbweni	-6.592090	39.137856	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Mchafukoge	-6.820901	39.281666	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Mchikichini	-6.817147	39.264479	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Mianzini	-6.932836	39.261971	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897
Miburani	-6.852302	39.272801	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955
Mikocheni	-6.762813	39.244308	0.001407	0.002875	0.002454	0.003883	0.003889	0.004595	0.010968	0.004296
Mjimwema	-6.860836	39.357034	0.002110	0.002875	0.003926	0.004016	0.006331	0.008015	0.008378	0.005093
Msasani	-6.759848	39.273613	0.001294	0.003008	0.002999	0.004217	0.003979	0.004702	0.012948	0.004735
Msigani	-6.800745	39.115798	0.001829	0.001990	0.002999	0.005021	0.003618	0.005344	0.012187	0.004712
Msongola	-7.011977	39.143508	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Mtoni	-6.867840	39.278656	0.001829	0.003096	0.004472	0.004686	0.006783	0.006947	0.012187	0.005714

Mwananyamala	-6.784754	39.257756	0.001547	0.003096	0.002508	0.003883	0.003437	0.004061	0.013253	0.004541
Mzimuni	-6.808747	39.256431	0.000844	0.002875	0.002727	0.002678	0.003165	0.003740	0.009902	0.003704
Ndugumbi	-6.799150	39.247407	0.001547	0.003317	0.002727	0.004351	0.004070	0.004809	0.009902	0.004389
Pembamnazi	-7.095698	39.472534	0.002307	0.002433	0.004090	0.006560	0.007235	0.006412	0.013710	0.006107
Pugu	-6.896464	39.119412	0.001407	0.003361	0.003545	0.004686	0.004974	0.005878	0.012187	0.005148
Sandali	-6.853314	39.245984	0.002307	0.003627	0.003545	0.004351	0.007235	0.006947	0.010663	0.005525
Saranga	-6.788181	39.145984	0.002251	0.003096	0.003272	0.005690	0.006331	0.006947	0.009902	0.005355
Segerea	-6.839944	39.196793	0.002392	0.003184	0.002999	0.005021	0.005426	0.006947	0.011425	0.005342
Sinza	-6.781629	39.221924	0.000141	0.003538	0.001091	0.003347	0.000452	0.000534	0.013710	0.003259
Somangila	-6.908111	39.451088	0.001857	0.001990	0.002999	0.004016	0.005426	0.008122	0.009902	0.004902
Tabata	-6.826313	39.224188	0.001969	0.003096	0.003272	0.004686	0.005426	0.006412	0.010663	0.005075
Tandale	-6.792006	39.241567	0.001351	0.003096	0.002563	0.004217	0.004070	0.004809	0.010359	0.004352
Tandika	-6.865387	39.255053	0.001941	0.003759	0.003272	0.004016	0.005878	0.007481	0.011425	0.005396
Temeke	-6.847941	39.254696	0.001632	0.002654	0.002181	0.005690	0.006331	0.006412	0.007617	0.004645
Toangoma	-6.931747	39.315519	0.002110	0.001769	0.004090	0.005355	0.008139	0.005344	0.014472	0.005897
Tungi	-6.833454	39.322478	0.001547	0.002875	0.003326	0.005355	0.006331	0.005344	0.012948	0.005389
Ubungo	-6.782291	39.205799	0.000844	0.000885	0.003817	0.004686	0.005426	0.004275	0.009140	0.004153
Ukonga	-6.874333	39.170738	0.001688	0.003538	0.002727	0.002678	0.004522	0.005344	0.009140	0.004234
Upanga Magharibi	-6.802382	39.273508	0.001688	0.003317	0.000545	0.003012	0.002713	0.002137	0.012187	0.003657
Upanga Mashariki	-6.804820	39.280842	0.001125	0.003538	0.001636	0.004016	0.003618	0.005344	0.010663	0.004277
Vijibweni	-6.860249	39.318021	0.001716	0.003096	0.003545	0.004351	0.006783	0.005878	0.009902	0.005039
Vingunguti	-6.843309	39.227454	0.002251	0.003981	0.003817	0.005355	0.005426	0.007481	0.013710	0.006003
Wazo	-6.677505	39.156571	0.001407	0.003184	0.001909	0.003883	0.003618	0.004275	0.011425	0.004243
Yombo Vituka	-6.877826	39.226253	0.002251	0.003981	0.003817	0.005021	0.005426	0.007481	0.013710	0.005955