Nairobi household survey methodology and sampling

The Nairobi survey covered a total of 1,434 households. To generate as representative a city-wide sample as possible, the survey was conducted in randomly selected administrative sub-locations spread across all the administrative districts (or sub-counties) and divisions of Nairobi City County. The sampled households were randomly selected from these administrative sub-locations. The households were located in 23 administrative locations and sub-locations, covering all the administrative divisions and districts of Nairobi City County. Table 1 gives a summary of the sampled areas. Nairobi is divided into four administrative districts (or sub-counties): Nairobi West, Nairobi East, Nairobi North and Westlands.

Table 1: Sampled Administrative Sub-Locations in Nairobi

Sampled sub-location*	Division	District
1. Kawangware	Dagroretti	Nairobi West
2. Kenyatta/Golf Course	Dagroretti	Nairobi West
3. Riruta	Dagroretti	Nairobi West
4. Karen	Kibera	Nairobi West
5. Lindi	Kibera	Nairobi West
6. South C	Kibera	Nairobi West
7. Embakasi	Embakasi	Nairobi East
8. Komarock	Embakasi	Nairobi East
9. Umoja	Embakasi	Nairobi East
10. Hamza	Makadara	Nairobi East
11. Makongeni	Makadara	Nairobi East
12. Hazina	Makadara	Nairobi East
13. Huruma	Central	Nairobi North
14. Pangani	Central	Nairobi North
15. Ngara East	Central	Nairobi North
16. Zimmerman	Kasarani	Nairobi North
17. Roysambu	Kasarani	Nairobi North
18. Uhuru	Pumwani	Nairobi North
19. Shauri Moyo	Pumwani	Nairobi North
20. Bondeni/Gorofani	Pumwani	Nairobi North
21. Highridge	Westlands	Westlands
22. Kileleshwa	Westlands	Westlands
23. Spring Valley	Westlands	Westlands
*The administrative units are based on the 2009 Kenya Population and Housing Census		

The districts are further sub-divided into eight administrative divisions. These are Dagoretti and Kibera (in Nairobi West); Embakasi and Makadara (in Nairobi East); Central, Kasarani and Pumwani (in Nairobi North); and Westlands division (in Westlands). These divisions are further divided into a total of 49 administrative locations. Lastly, the locations are split into 111 sub-locations, which are the lowest administrative units in Kenya. The survey covered sampled households in 23 of the administrative sub-locations of Nairobi City County.

Table 2: Location of Sampled Households by Sub-Location

	No. of households in sub-location	No. of sampled households
Nairobi West District		
Dagoretti Division		
Kawangware	22,262	192
Kenyatta/Golf Course	5,987	27
Riruta	20,245	94
Kibera Division		
Karen	2,861	21
Lindi	11,551	74
South C	13,759	49
Nairobi East District		
Embakasi Division		
Embakasi	19,815	111
Komarock	8,039	46
Umoja	28,097	160
Makadara Division		
Hamza	5,348	65
Makongeni	3,744	43
Hazina	6,445	50
Nairobi North District		
Central Division		
Huruma	23,800	112
Pangani	9,343	58
Ngara East	5,067	30
Kasarani Division		
Zimmerman	10,309	62
Roysambu	9,002	55
Pumwani Division		
Uhuru	6,450	40
Shauri Moyo	5,304	41
Bondeni/Gorofani	1,824	17
Westlands District		
Westlands Division		
Highridge	8,075	50
Kileleshwa	4,592	24
Spring Valley	1,378	13
The administrative units are based on the 2009 Kenya Population and Housing Census		

The number of sampled households was determined using a multi-stage proportional- to population size (PPS) random sampling procedure. First, a random. sample of three administrative locations in each administrative division was selected, except for Kasarani where only two were selected. This gave a total of 23 locations out of the 111 in Nairobi City County. Next, the number of households sampled in each selected sub-location was proportional to the total number of households in that sub-location (see Table 2). Lastly,

depending on the form and density of the sub-location, a random sampling procedure was used to select the sampled households in residential neighbourhoods (estates) in the sub-location. Although the sample sizes for each sampled administrative sublocation were, as far as practically possible, proportionate to the total number of households in each sub-location, it is not possible to guarantee full representativeness. This is largely due to the fact that the final selection of households was, in some instances, influenced by external factors such as the form and density of the sub-location, security considerations, cooperation from administrative officials, availability of sampling frames, availability of respondents during working days, willingness of respondents, access to gated communities, determination of spatial coverage area in the sub-location, and suspicion due to the political climate in Kenya during the survey period.

The Nairobi case study research team comprised the coordinator, a field supervisor, data capturing manager and 29 enumerators. The enumerators were divided into smaller teams on a daily basis. The research team underwent a two-day training exercise to understand the questionnaire and associated data capturing tools adequately. The survey took 14 days to complete.