

2012-13 LIBERIA DEMOGRAPHIC AND HEALTH SURVEY

(2012-13 LDHS)

MANUAL FOR HOUSEHOLD LISTING

ICF International

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CONTENTS

- I. Introduction
- II. Responsibilities of the listing staff
- III. Definition of terms
- IV. Locating the cluster
- V. Preparing the location map and the sketch map
- VI. Listing of households
- VII. Segmentation of large EA
- VIII. Quality control
- IX. GPS Waypoint Collection
- X. Prepare the household listing forms for household selection
- Appendix 1 Examples of symbols for mapping and listing
- Appendix 2 Examples of mapping and listing forms
- Appendix 3 Example of segmentation form

I. Introduction

The 2012-13 LDHS is a national sample survey designed to provide reliable and detailed information on socio-demographic characteristics of the general population, health and nutritional status of children, and information on reproductive health and HIV infection in the country. The survey will interview women and men between the ages of 15 and 49 who are usual members of the selected households or who stayed in the selected households the night before survey. The households and therefore the women and men are randomly selected from a set of sample points which are *clusters* of households. Prior to interview, all households located in the selected clusters will be listed. The list of households for each cluster will be used in selecting the final sample of households to be included in the 2012-13 LDHS.

The listing operation consists of visiting each of the selected 322 clusters or EAs, recording on listing forms a description of every structure, recording the names of the heads of the households found in the structure, drawing a location map of the cluster, and drawing a sketch map of the structures in the cluster.

II. Responsibility of the listing staff

Persons recruited to participate in the household listing operation will work in teams consisting of two enumerators - one is designated a mapper, the other a lister. A coordinator will monitor the entire operation.

The responsibilities of the coordinator are to:

- 1) obtain base maps for all clusters included in the survey
- 2) arrange for the reproduction of all listing materials (listing manuals, mapping and listing forms)
- 3) assign teams to clusters
- 4) monitor the return of completed listing forms at the central office
- 5) verify that the quality of work is acceptable

The responsibilities of the enumerators are to:

- 1) identify the boundaries of the cluster
- 3) draw a location map showing the location of the cluster
- 4) draw a detailed sketch map of the cluster showing the locations of all structures in the cluster
- 4) list all the households in the cluster in a systematic manner
- 5) communicate to the coordinator problems encountered in the field and follow her/his instructions
- 6) transfer the completed listing forms to the coordinator or to the central office

The two enumerators should work together as a team at the same time in the same area. First, identify the cluster boundaries. Then, the mapper prepares the location and sketch map while the lister conducts the household listing. Ensure that there are enough copies of the blank sketch map forms and household listing forms before starting.

The materials needed for the household listing operation are:

- Manual for Household Listing
- Base map of the area containing the cluster
- Map Information Form (Form LDHS/1)
- Household Listing Form (Form LDHS/2)
- Segmentation Form (Form LDHS/3)
- GPS Manual
- GPS Receiver
- GPS Data Collection Form

III. Definition of terms

The initial information used in household listing comes from the National Population and Housing Census conducted in March 2008 (NPHC 2008).

An *enumeration area* (EA) is the smallest geographical statistical unit created in the NPHC and contains a fixed number of households.

A *base map* is a reference map that contains one or more EAs. It shows the boundaries of the EAs, the principal physical features and land marks such as mountains, rivers, roads and electric poles.

A *cluster* is the smallest geographical statistical unit in the LDHS. In most cases a cluster is equivalent to an EA; large EAs, however, may be subdivided into several clusters in which case a cluster represents part of an EA.

A *dwelling unit* is a room or a group of rooms normally used as a residence for one household (for example: a single house, an apartment, a group of rooms in a house).

A *structure* is a free-standing building that can have one or more rooms, for residential or commercial use. Residential structures can have one or more dwelling units (for example: single house, apartment building). In the case where one household inhabits several small dwellings, as in rural areas, all the dwellings together constitute a structure. It does not matter if the dwelling is fenced in or not.

A *household* consists of a person or a group of related or unrelated persons, who live together in the same dwelling unit, who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements, and are considered as one unit. In some cases one may find a group of people living together in the same house, but each person has separate eating arrangements; they should be counted as separate one-person households. Collective living arrangements such as army camps, boarding schools, or prisons will not be considered households. Examples of households are:

- a man with his wife or his wives with or without children
- a man with his wife or his wives, his children and his parents
- a man with his wife or his wives with his married children living together for social or economic reasons (the group recognize one person as household head)
- an unmarried man or woman with his or her children living together

- a widowed or divorced man or woman with or without children

The *head of household* is the person who is acknowledged as such by members of the household and who is usually responsible for the upkeep and maintenance of the household.

A *location map* is a map produced during the household listing operation which indicates the main access to a cluster, including main roads and main landmarks in the cluster. Sometimes it may be useful to include important landmarks in the neighboring cluster.

A *sketch map* is a map produced in household listing operation, with the location of all structures found in the listing operation which helps the interviewer locate the selected households. A sketch map also contains the cluster identification information, location information, access information, and features such as mountains, rivers, roads and electric poles.

IV. Locating the cluster

The coordinator will provide the listing team with a base map containing the cluster assigned to the team. Upon arrival in a cluster, the team should contact the local authorities living in the vicinity and request assistance identifying the boundaries of the cluster. In most cases, the boundaries follow easily recognizable natural features such as streams, rivers, roads, or railroads. In some cases, such as rural areas, the boundaries may not be visibly marked. Be precise when locating the extent of the cluster.

Before conducting the listing, the team should tour the cluster to determine an efficient route of travel for listing all the structures. Divide the cluster into parts if possible. A part can be a block of structures. It is useful to make a rough sketch map of the cluster indicating the boundaries of the parts, as well as the relative location of landmarks, public buildings (e.g., such as schools, temples, public offices and markets) and main roads. This rough sketch will serve as guide for the team when they begin the main work.

V. Preparing the location map and the sketch map

The coordinator will designate one enumerator on the team as the mapper and one as the lister. Although the two have separate tasks to perform, they must move together and work in tandem; the mapper prepares the maps, and the lister collects information on the structures (and corresponding households) indicated on the sketch map.

The mapping of the cluster and the listing of the households should be done in a systematic manner so there are no omissions or duplications. If the cluster consists of a number of blocks, the team should finish each block before going to the adjacent one. Within each block or village, start at one corner of the block or village and move clockwise around the block. In rural areas where the structures are frequently found in small groups, the team should work in one group of structures at a time. In each group start at the center (choosing any landmark, such as a school) and move around it clockwise.

On the first page of the Map Information Form (Form LDHS/1), the mapper will prepare a location map of the cluster. First, fill in the identification box for the cluster. All information needed for

filling in the identification box is provided by the coordinator. In the space provided, draw a map showing the location of the cluster and include instructions on how to get to the cluster. Include all useful information needed to find the cluster and its boundaries in the space reserved for observations.

On the second page of Form LDHS/1, draw a sketch map of all structures found in the cluster. It is important that the mapper and lister work together and coordinate their activities. The structure numbers that the mapper marks on the sketch map must correspond to the serial numbers assigned by the lister to the same structures.

On the sketch map, mark the starting point with a large X. Place a small square at the spot where each structure in the cluster is located. For any nonresidential structure, identify its use (for example, a store or factory). Number all structures in sequential order beginning with "1". Whenever there is a break in the numbering of structures (for example, when moving from one block to another), use an arrow to indicate how the numbers proceed from one set of structures to another. Although it may be difficult to pinpoint the exact location of the structure on the map, even an approximate location is useful for finding the structure in the future. Add to the sketch map all landmarks (such as a park), public buildings (such as a school or church), and streets or roads. Sometimes it is useful to add landmarks that are found outside the cluster boundaries, if they are helpful in identifying other structures inside the cluster. See Appendix 1 for examples of symbols that are useful for the creation of maps.

Using the **marker or chalk** provided, write on the entrance to the structure the number assigned to it. Remember, this is the serial number of the structure as assigned on the household listing form, which is the same as the number indicated on the sketch map. In order to distinguish this number from other numbers that may exist already on the door of the structure, write LDHS in front of the number, for example, on structure number 3, write LDHS/3, similarly on the door of structure number 54 write LDHS/54.

A structure is called a *single structure* if it contains only one household. A structure is called a *multi-unit structure* if it contains more than one household. ***All households found in a multi-unit structure must be numbered with a serial number*** starting with 1. The structure number plus the household number form a unique identification number for a household. For example, household number 2 in structure number 3 should be marked LDHS/3/2. Household number 1 in structure number 54 should be marked LDHS/54/1. It is useful to write the household identification number on the entrance of the household to ensure that the correct household can be located during the survey.

VI. Listing of households

The lister will use the Household Listing Form (Form LDHS/2) to record all structures and households found in the cluster. Begin by entering the identification codes of the cluster. The first column (A) is reserved for office use only; leave it blank.

Complete the rest of the form as follows:

Column (1) [*Serial Number of Structure*]: For each structure, record the serial number that the mapper entered on the sketch map.

Column (2) [*Serial Number of Household in Structure*]: This is the serial number assigned to

each household found in the structure; there can be more than one household in a structure. The first household in the structure will always have number "1". If there is a second household in the structure, then this household should be recorded on the next line; a "2" is recorded in Column (2), and Columns (1) and (4) repeat the structure number and address or are left blank.

Column (3) [*Residence Y/N*]: Indicate whether the structure/dwelling unit is used for residential purposes (eating and sleeping) by writing "Y" for yes. In cases where a structure/dwelling unit is used for commercial or other purposes, write "N" for no. Structures used both for residential and commercial purposes (for example, a combination store and home) should be classified as residential; mark "Y" in Column (3). Make sure to list any household unit found in a nonresidential structure (for example, a guard living inside a factory or in a church).

Do not forget to list vacant structures and structures under construction. In such cases, Columns (2) [*Serial Number of Household in Structure*] and (5) [*Name of Household Head*] should be left blank, and in Column (6) [*Observations*], give some explanation (for example: under construction, vacant, etc.). For households where the members are not home at the time of the listing, leave Column (5) blank, and record "No one at home" in Column (6). For households where the household members refuse to cooperate, record the household as residential but note in Column (6) "refused".

Column (4) [*Address/locality*]: Record the street address of the structure or address of a dwelling unit in a structure. Where structures do not have visible street addresses (especially in rural areas), give a description of the structure and any details that help in locating it (for example, in front of the school, next to the store, etc.)

Column (5) [*Name of Household Head*]: Write the name of the head of the household. There can only be one head per household. If no one is home or the household refuses to cooperate, ask neighbors for the name of the head of the household. If a name cannot be determined, leave this column blank. Note that this is not the name of the landlord or owner of the structure. This is the name of the head of the household that lives there.

Column (6) [*Observations*]: This space is provided for any special remarks that might help the coordinator in deciding either to include a household in the household selection or not. It also might help the interviewing team locate the structure or identify the household during the main survey fieldwork.

If the structure is an apartment building, assign one serial number to the entire structure (only one square with one number appears on the sketch map), but complete Columns (2) through (6) for each apartment in the building individually. Each apartment should have its own address, which is the apartment number.

The listing team should be careful to locate hidden structures. In some areas, structures have been built so haphazardly that they can easily be missed. Especially in rural areas, structures may be hidden by tall grasses and trees. If there is a pathway leading from the listed structure, check to see if the pathway goes to another structure. People living in the area may help in identifying the hidden structures.

VII. Segmentation of large EAs

Some selected EAs may be very large in population. A complete listing of these EAs may be costly and may not be suitable for the survey. These EAs should be subdivided into several small segments, only one of which will be retained for the survey and will be listed. In this case, the LDHS cluster corresponds to a segment of the EA. When the team arrives in a large EA that may need segmentation, they should first tour the EA and make a quick count to estimate the number of households residing in the EA. Then tell the coordinator the estimated number of households and the number of segments intended to be created. The decision to segment and the number of segments to be created can only be taken by the coordinator. For easy operation, the recommended number of segments is 2. Avoid creating a large number of segments (more than 3) to reduce the chance of errors.

In the 2012-13 LDHS, all EAs having 300 households or more should be segmented. The goal is to have segments of approximately equal size, but it is also important to adopt segment boundaries that are easily identifiable. First draw a sketch map of the entire EA. Using identifiable boundaries such as roads, streams, and electric power lines, divide the EA into the designated number of roughly equal-sized segments. On the map of the EA, clearly show the boundaries of the segments created. Number the segments sequentially. Estimate the size of each segment in the following manner: quickly count the number of dwelling units in each segment, add them up and calculate the proportion of dwelling units for each segment.

Example: An EA of 420 dwellings has been divided into 2 segments and the results are as follows:

Segment 1:	220 dwellings,	or	220/420	=	52 percent
Segment 2:	200 dwellings,	or	200/420	=	48 percent
Total:	420 dwellings,	or	420/420	=	100 percent

On the Segmentation Form (Form LDHS/3) write the size of the segments in the appropriate columns (number and percent) and calculate the cumulative percent. The last cumulative percent must be equal to 100.

Example

Segment number	Number of dwellings	Percent	Cumulative percent
1	220	52	52
2	200	48	100

For each large EA to be segmented, a random number will be selected in the central office and included in the file. Compare this random number with the cumulative percent. Select the first segment whose cumulative percent is greater than or equal to the random number.

Example: Random number: 67
Segment selected: Segment number 2

Proceed with the household listing operation in segment number 2 as described in the above sections. See Appendix 3 for an example of how the segmentation form is filled. Draw a detailed sketch map of the selected segment and list all households found in the selected segment.

VIII. Quality control

To ensure that work done by each listing team is acceptable, quality check will be performed. The coordinator should tour regions during the household listing operation and assess the quality of the finished clusters. The coordinator should select a finished cluster and conduct an independent listing of 10 percent of the cluster. If important errors are found, the whole cluster will be relisted. If the error is systematic and it is not possible to correct the listing forms, all of the listed clusters should be relisted.

IX. GPS Waypoint Collection

GPS waypoints will be collected for each LDHS cluster during the listing. A detailed manual (LDHS GPS Manual) on their collection has been prepared and should serve as a reference for GPS waypoint data collection for the 2012-13 LDHS.

X. Prepare the household listing forms for household selection (OFFICE WORK)

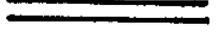
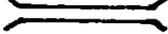
Once the central office receives completed listing materials for a cluster, they must assign unique a household number for each listed, occupied residential household in the cluster. This number will go in Column (A) (**Household Number**) of the Household Listing Form (Form LDHS/2). Only occupied, residential households should be given a household number; occupied residential households include households that refuse to cooperate at the time of listing and households where the occupants are absent at the time of listing but, according to their neighbors, are not away for an extended time period and thus can be expected to be at home during the period of household interview (this information should be noted in Column (6) (**Observations**) of Form LDHS/2). The Household Number is a serial number from 1 to the total number of occupied residential households listed in the cluster. Leave the cell in Column (A) blank if the corresponding household is vacant (check Column (6), **Observations**), or the structure is not a residential structure (Column (3) is N). When you arrive at a row listing an occupied residential household, continue numbering from the point you left off; see attached example listing form in Appendix 2.

After assigning a household number in Column 2 for each occupied residential household in the entire cluster, *enter total number of households listed in the cluster* into the column labeled “**Num. HHs listed**” in the Excel spreadsheet prepared for household selection. Make sure this number is copied into the cell corresponding to the correct cluster number. The household numbers of selected households will appear automatically. If an EA was segmented, enter segmentation information in column labeled “**% Segment selected**”. For a cluster that has not been segmented, leave the cell blank. For a cluster that has been divided, enter the percentage of the segment selected relative to the entire EA. The segmentation information is important for correctly calculating the sampling weights.

After finishing the household selection process in the Excel spreadsheet, information about which households the survey team must interview needs transferred back to the Household Listing Form. Specifically, mark Column 1 of the Household Listing Form with a colored pen to indicate the households selected for interviewing; mark those households selected for male survey and biomarker collection with a different color pen. It is helpful to highlight structures where selected households are located on the sketch map. Maintain the same color scheme. This will save time for the interviewers to locate the sampled households in the field.

Make a copy of all files (sketch maps and listing forms with household selection marked), give original or copy to interviewer team for household interview and keep other copy in central office.

Appendix 1. Examples of symbols for mapping and listing

Orientation to the North	
Boundaries of the cluster	
Paved road	
Unpaved (dirt) road	
Footpath	
River, creek, etc.	
Bridge	
Lake, pond, etc.	
Mountains, hills	
Water point (wells, fountain, etc.)	
Market	
School	
Administrative building	
Church, temple	
Mosque	
Cemetery	
Residential structure	
Non-residential structure	
Vacant structure	
Hospital, clinic, etc.	
Electric pole	
Tree, bush	

Appendix 2. Examples of mapping and listing forms

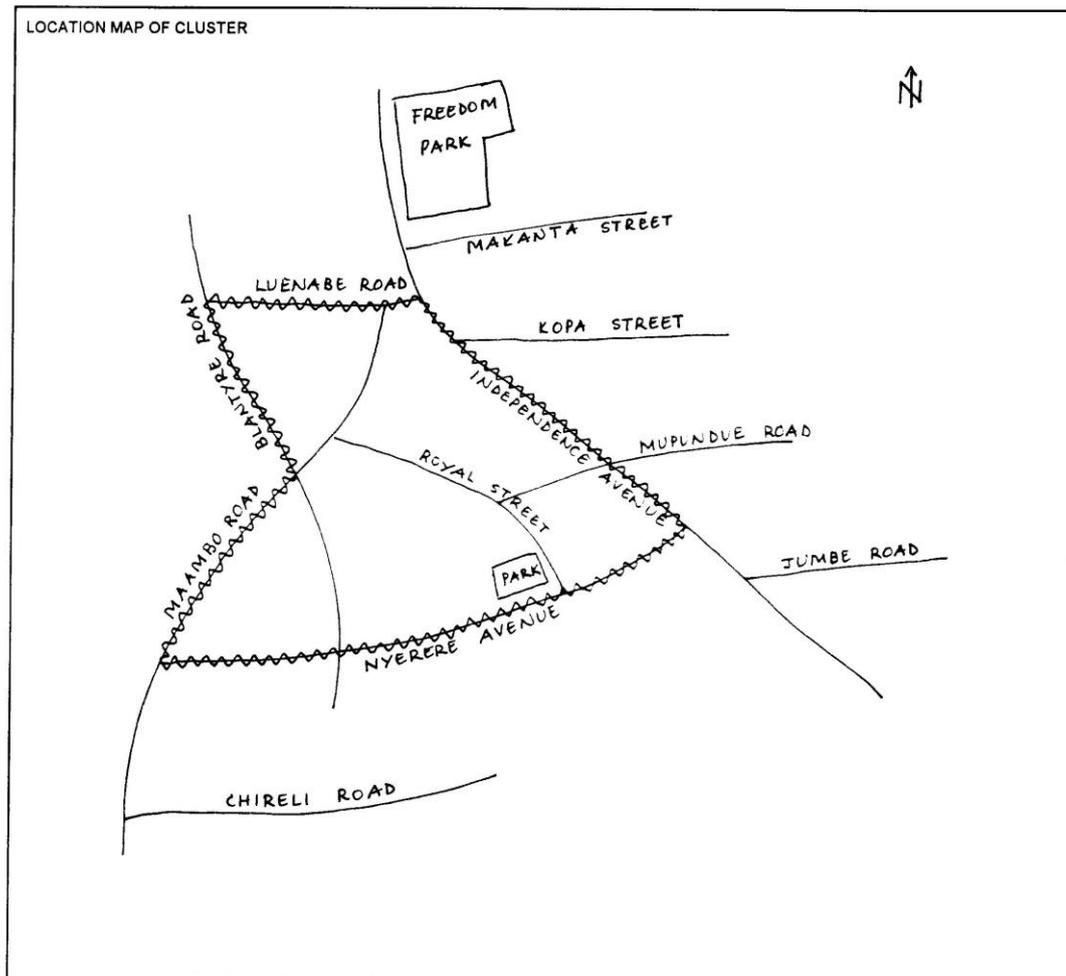
Form DHS/1

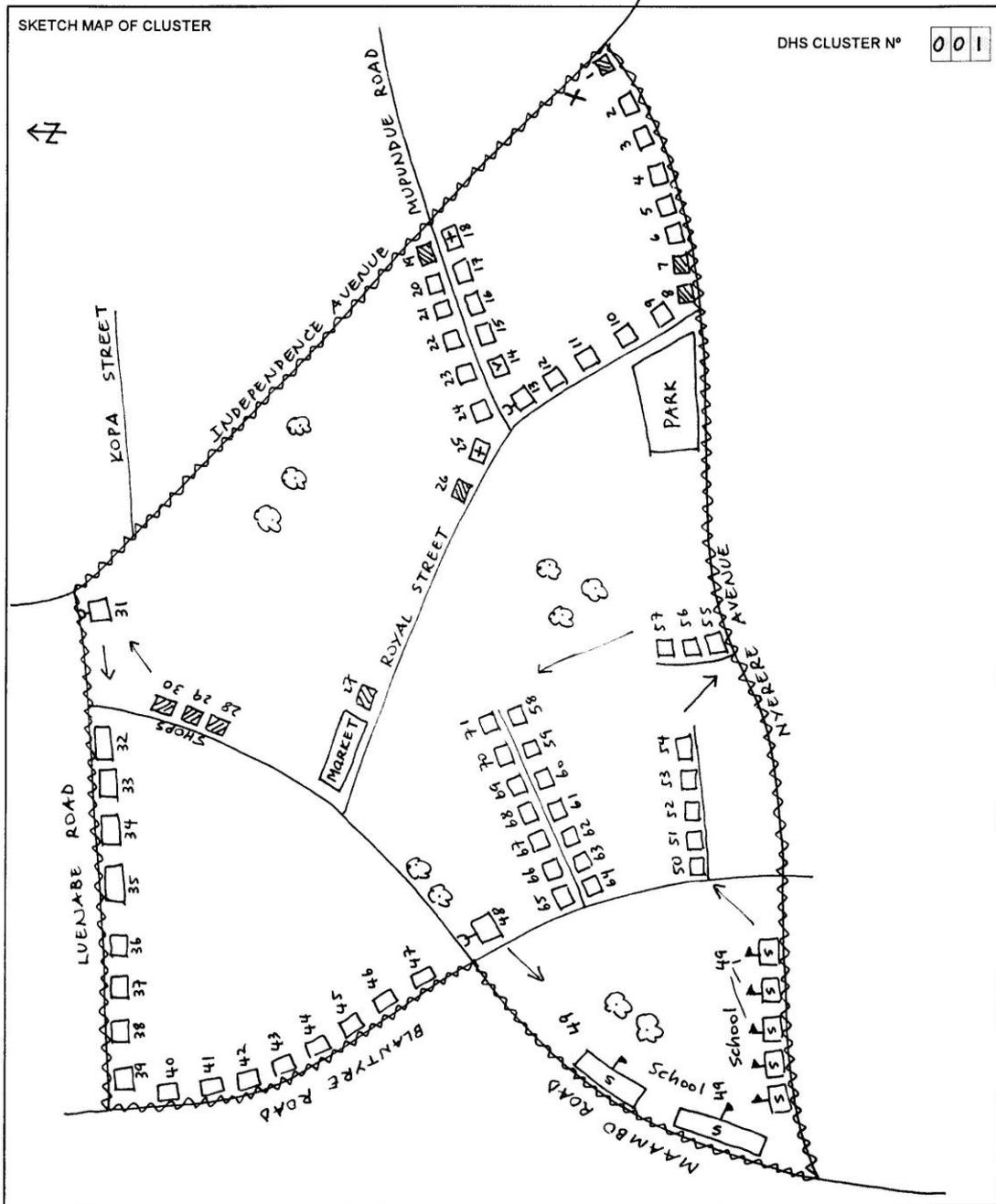
DEMOGRAPHIC AND HEALTH SURVEY
MAP INFORMATION

Page 1

IDENTIFICATION				
PROVINCE <u>KAYES</u>	PROVINCE CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">1</td></tr></table>	1		
1				
DISTRICT <u>DIEMA</u>	DISTRICT CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">4</td></tr></table>	0	4	
0	4			
TOWN/VILLAGE <u>DIEMA</u>	TOWN/VILLAGE CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td></tr></table>	0	2	
0	2			
NAME OF MAPPER <u>Harrison Sidibe</u>	CLUSTER CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">1</td><td style="text-align: center;">7</td></tr></table>	0	1	7
0	1	7		
NAME OF LISTER <u>John Melaku</u>	DHS CLUSTER N° <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">1</td></tr></table>	0	0	1
0	0	1		

OBSERVATIONS:





HOUSEHOLD LISTING FORM

LDHS CLUSTER #: 101011

Urban-Rural: 111

Locality: Springfield

SAREA: 101011

District: 1011

Region: 111

Township/Clan: 1011

County: 1011

Lister: 1111

(Office use only) Household number (A)	Serial number of structure (1)	Serial number of household in structure (2)	Residence Y/N (3)	Address / Locality (4)	Name of household head (5)	Observations (6)
	1		N	Nyerere Avenue		Pharmacy
1	2	1	Y	6 Nyerere Avenue	Diane Obate	
2	3	1	Y	8 Nyerere Avenue	Eugene Kariba	
3		2			Dorothy Uchi	
	4	1	Y	10 Nyerere Avenue		No one at home.
4	5	1	Y	12 Nyerere Avenue	Sam Loua	
5	6	1	Y	14 Nyerere Avenue	Harrison Johnson	
6		2			Paul Liande	
7		3			Harry Fiwale	
	7		N	Nyerere Avenue		In construction.
	8		N	Nyerere Avenue		In construction.
8	9	1	Y	22 Royal Street	George Sidibi	
9	10	1	Y	20 Royal Street		Refused.
10	11	1	Y	18 Royal street	Chief Seidou	
11	12	1	Y	16 Royal street	Ann Tonde	
	13		N	Mupundue Road		Mosque
	14		N	4 Mupundue Road		vacant
12	15	1	Y	6 Mupundue Road	Suzanne Ibenga	Shop home upstairs, downstairs

Appendix 3. Example of segmentation form

Form DHS/3

DEMOGRAPHIC AND HEALTH SURVEY
SEGMENTATION FORM

IDENTIFICATION				
PROVINCE <u>KOULIKORO</u>	PROVINCE CODE <table border="1"><tr><td></td><td>4</td></tr></table>		4	
	4			
DISTRICT <u>DIO LA</u>	DISTRICT CODE <table border="1"><tr><td>0</td><td>2</td></tr></table>	0	2	
0	2			
TOWN/VILLAGE <u>DIONGAGA</u>	TOWN/VILLAGE CODE <table border="1"><tr><td>0</td><td>6</td></tr></table>	0	6	
0	6			
NAME OF MAPPER <u>WOLDE CONATE</u>	CLUSTER CODE <table border="1"><tr><td>0</td><td>2</td><td>3</td></tr></table>	0	2	3
0	2	3		
NAME OF LISTER <u>ANDRE LUENA</u>	DHS CLUSTER N° <table border="1"><tr><td>0</td><td>1</td><td>5</td></tr></table>	0	1	5
0	1	5		

NUMBER OF SEGMENTS TO BE CREATED

0	3
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Segment Number	Number of dwellings	Percent	Cumulative percent
1	220	35%	35%
2	190	31%	66%
3	210	34%	100%
4			
5			
6			
7			
8			
9			
10			
11			
12			

RANDOM NUMBER BETWEEN 1 AND 100:

0	6	7
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SEGMENT SELECTED:

0	3
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