

AIDS Indicator Survey

Household Listing Manual

**Macro International Inc.
Calverton, Maryland**

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The AIDS Indicator Survey was developed as part of the MEASURE DHS project. MEASURE DHS assists countries worldwide with the collection and use of data to monitor and evaluate population, health and nutrition programs. Funded by the U.S. Agency for International Development (USAID), MEASURE DHS is implemented by Macro International Inc. in Calverton, Maryland.

Information about the MEASURE DHS project can be obtained by contacting Macro International Inc., 11785 Beltsville Drive, Suite 300, Calverton, MD, 20705, USA. Telephone: 301-572-0200; Fax: 301-572-0999; E-mail: reports@orcmacro.com; Internet: <http://www.measuredhs.com>.

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I. INTRODUCTION

The AIDS Indicator Survey (AIS) is a national sample survey designed to provide information on monitoring and evaluation (M&E) of a country's national HIV/AIDS programs. The AIS survey will involve interviewing a randomly selected group of women and men who are between 15 and 49 years of age. These respondents will be asked questions about their background, the children they have given birth to, marriage and sexual behavior, their knowledge, attitudes and testing experience of HIV, and other information that will be helpful to policymakers and administrators in HIV and AIDS control.

The target population for an AIS is defined as households, and women and men of reproductive age (15-49). The survey will interview every woman and man age 15-49 in the households randomly selected from a set of sample points that are clusters of households. Before the interviewing, all households located in the selected clusters will be listed. The listing operation consists of visiting each of the selected clusters, recording on listing forms a description of every structure, together with the names of the heads of the households found in the structure, and drawing a location map of the cluster as well as a sketch map of the structures in the cluster.

The listing operation represents an appreciable field cost, but there is no reliable method by which it can be avoided. As stated in Section 10 of the AIS Sampling Manual [1], the listing operation represents one of the most important bias correction procedures in the survey, especially when the sampling frame is out-of-date. The listing operation will provide complete and recent information on the number of residential households, households occupied, and households vacant. These kinds of information are necessary for household selection to reduce non-sampling errors. The listing of households for each cluster will be used in selecting the final sample of households to be included in the AIS survey.

To ensure the quality of the household listing, this manual will briefly discuss the responsibility of the listing staff, the definition of terms, the locating of the clusters, drawing sketch maps of the clusters, listing the households, segmentation of large clusters, and the listing quality control. For more details of the household listing operation, refer to the DHS sampling manual [2].

II. RESPONSIBILITIES OF THE LISTING STAFF

Persons recruited to participate in the listing operation will work in teams consisting of two enumerators. A coordinator will monitor the entire operation.

The responsibilities of the coordinator are to:

1. Obtain base maps for all the clusters included in the survey
2. Arrange for the reproduction of all listing materials (e.g., listing manuals, mapping, and listing forms)
3. Assign teams to clusters
4. Obtain travel allowances for the teams
5. Arrange for transportation of the teams to the field
6. Monitor the reception of the completed listing forms at the central office
7. Verify that the quality of work is acceptable.

The responsibilities of the enumerators are to:

1. Contact local officials in each cluster to inform them about the listing operation and to obtain their cooperation
2. Identify the boundaries of the cluster
3. Draw a sketch map showing the location of the cluster
4. Draw a detailed sketch map of the cluster
5. List all the households in the cluster in a systematic manner
6. Communicate to the coordinator problems encountered in the field and follow his/her instructions.

The two enumerators in each team should work at the same time in the same area. They identify the cluster boundaries together, and then one enumerator prepares the location and sketch map, while the other does the household listing. The sketch map and the household listing form must be prepared in tandem.

The materials needed for the household listing operation are:

1. This manual
2. A base map of the area containing the cluster
3. Map Information Form (Form AIS/1)
4. Household Listing Form (Form AIS/2)
5. Segmentation Form (Form AIS/3)

III. DEFINITION OF TERMS

The basic documents for household listing usually come from the General Household and Population Census (GHPC) completed in a country in a recent year.

An *enumeration area* (EA) is the smallest geographical statistical unit created in the GHPC.

A *base map* is a reference map that contains one or more EAs. It shows the boundaries of the EAs and the principal physical features and landmarks (e.g., mountains, rivers, roads, and electric poles).

A *cluster* is the smallest geographical statistical unit, which is an EA or a part of an EA.

A *dwelling unit* is a room or a group of rooms normally intended as a residence for one household (e.g., a single house, an apartment, or 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 (e.g., a single house or an apartment building). In the case where one household inhabits several small dwellings, as in a rural area, all the dwellings together, whether they are fenced in or not, constitute a structure.

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 who are considered to constitute 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 (e.g., army camps, boarding schools, or prisons) will not be considered as 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 and his married children living together for some social or economical reasons (e.g., the group recognizes one person as the household head)
- An unmarried man or woman with his or her children who provides their living essentials and foods
- 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.

IV. LOCATING THE EAs

The coordinator will provide the listing team with a base map containing the EA assigned to the team. Upon arrival in an EA, the team should contact the local authorities living in the vicinity and request assistance to identify the boundaries of the EA. In most cases, the boundaries follow easily recognizable natural features (e.g., streams or rivers), and construction features (e.g., roads or railroads). In some cases, the boundaries may not be marked with visible features (especially in rural areas). In these cases, attention should be paid to carefully locating the EA using the detailed description file for the EA.

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

V. PREPARING LOCATION AND SKETCH MAPS

The coordinator will designate one enumerator of the team as the mapper. The second enumerator will be 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 EA and the listing of the households should be done in a systematic manner so that there are no omissions or duplications. If the EA consists of a number of blocks, then 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, and in each group they can start at the centre, choosing any landmark (e.g., a school, to be the centre), and move around it clockwise.

On the first page of the AIS Survey Map Information Form (Form AIS/1), the mapper will prepare a location map of the cluster by first filling 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 EA and include instructions on how to get to the EA. Include all useful information to find the EA and its boundaries directly on the map and in the space reserved for observations if necessary.

On the second page of Form AIS/1, draw a sketch map of all structures found in the EA. It is important that the mapper and lister work together and coordinate their activities, because the structure numbers that the mapper indicates 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 EA is located. For any nonresidential structure, identify its use (e.g., a store or factory). Number all structures in sequential order beginning with “1.” Whenever there is a break in the numbering of structures (e.g., 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 (e.g., park), public buildings (e.g., school or church), and streets or roads. Sometimes it is useful to add to the sketch map landmarks that are found outside the EA boundaries if they are helpful in identifying other structures inside the EA.

Use the marker or chalk provided to write on the entrance of the structure the number that has been assigned to the structure. Remember that 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. To distinguish the number from other numbers that may already exist on the door of the structure, write AIS in front of the number. For example, on the door of structure number 3, write AIS/3, or on the door of structure number 54, write AIS/54.

VI. LISTING THE HOUSEHOLDS

The lister will use the AIS Survey Household Listing Form (Form AIS/2) to record all households found in the EA. Begin by entering the identification codes of the EA; the first two columns are reserved for office use only, so leave them blank.

Complete the rest of the form as follows:

- Column (1) [*Serial Number of Structure*]: For each structure, record the same serial number that the mapper enters on the sketch map.
- Column (2) [*Address/Description of Structure*]: Record the street address of the structure. Where structures do not have visible street addresses (e.g., often in rural areas), give a description of the structure and any details that help in locating it (e.g., in front of the school or next to the store).
- Column (3) [*Residence Y/N*]: Indicate whether the structure is used for residential purposes (e.g., eating and sleeping) by writing Y for “Yes.” In cases where a structure is used for commercial or other purposes, write N for “No.” Structures used both for residential and commercial purposes (e.g., a combination of a store and a home) should be classified as residential (i.e., mark Y in Column 3). Make sure to list any household unit found in a nonresidential structure (e.g., a guard living inside a factory or in a church).
- Do not forget to list vacant structures and structures under construction, as well as structures where the household members refuse to cooperate, or are not at home at the time of the listing. In such cases, leave Columns (4) and (5) blank, and in Column (6) [*Observations*], give some explanation (e.g., under construction, refusal, or not at home).
- Column (4) [*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 (4), and Columns (1) to (3) are left blank).
- Column (5) [*Name of Head of Household*]: Write the name of the head of the household. There can only be one head per household. If no one is home, ask neighbors for the name of the head of the household. If a name cannot be determined, leave this column blank. Note that it is not the name of the landlord or owner of the structure that is needed, but 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 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 (e.g., 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. 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 of the EAs selected for the AIS may be very large in population size. A complete household listing of these EAs may be costly and may not be suitable to be undertaken in a survey. These EAs should be subdivided into several small segments, only one of which will be retained for the survey and be listed. In this case, the AIS cluster corresponds to a segment of the EA. When the team arrives in a large EA that may need segmentation, it should first tour the EA and make a quick count to get the estimated number of households residing in the EA. Then the team should communicate to the coordinator the estimated number of households in the EA and the number of segments intended to be created. The decision of segmentation and the number of segments to be created can only be made by the coordinator. For easy operation, the recommended number of segments is two. To avoid errors, designating a large number of segments (e.g., more than three) should be avoided if it is not necessary.

The ideal would be to have segments of approximately equal size, but it is also important to adopt segment boundaries that are easily identifiable. Begin by drawing a sketch map of the entire EA. Using identifiable boundaries (e.g., roads, streams, and electric power lines), divide the EA into the designated number of roughly equal-sized segments. On the map of the cluster, show clearly 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 dwellings in each segment, add them up, and calculate the proportion of dwellings in each segment.

Example: An EA of 620 dwellings has been divided into 3 segments and the results are as follows:

Segment 1: 220 dwellings, or $220/620$ = 35 percent
Segment 2: 190 dwellings, or $190/620$ = 31 percent
Segment 3: 210 dwellings, or $210/620$ = 34 percent
Total: 620 dwellings, or $620/620$ = 100 percent

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

Example

Segment number	Number of dwellings	Percentage	Cumulative percentage
1	220	35%	35%
2	190	31%	66%
3	210	34%	100%

For each large EA to be segmented, a random number between 1 and 100 will be selected in the central office and included in the file. Compare this random number with the cumulative percentage. Select the first segment whose cumulative percentage is greater than or equal to the random number.

Example: Random number: 67
 Segment selected: Segment number 3

Draw a detailed sketch map of the selected segment and list all households found in the selected segment.

VIII. QUALITY CONTROL

To ensure that the work done by each listing team is acceptable, a quality check will be performed. The coordinator will do an independent listing of 10 percent of each cluster. If errors are found in 2 percent or more of the re-listed sample, the whole cluster will be re-listed. If less than 2 percent of the original sample listing is wrong, corrections will be made on the household listing form, and no re-listing is necessary.

IX. REFERENCES

1. Macro International Inc. (ORC Macro). 2006. *Guidelines of sampling for AIDS Indicator Survey*. Calverton, Maryland: ORC Macro.
2. Macro International Inc. (ORC Macro). 1996. *Sampling manual*. DHS-III Basic documentation # 6. Calverton, Maryland: ORC Macro.

X. APPENDIX 1. EXAMPLES OF SYMBOLS FOR MAPPING

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

XI. APPENDIX 2. EXAMPLES OF MAPPING AND LISTING FORMS

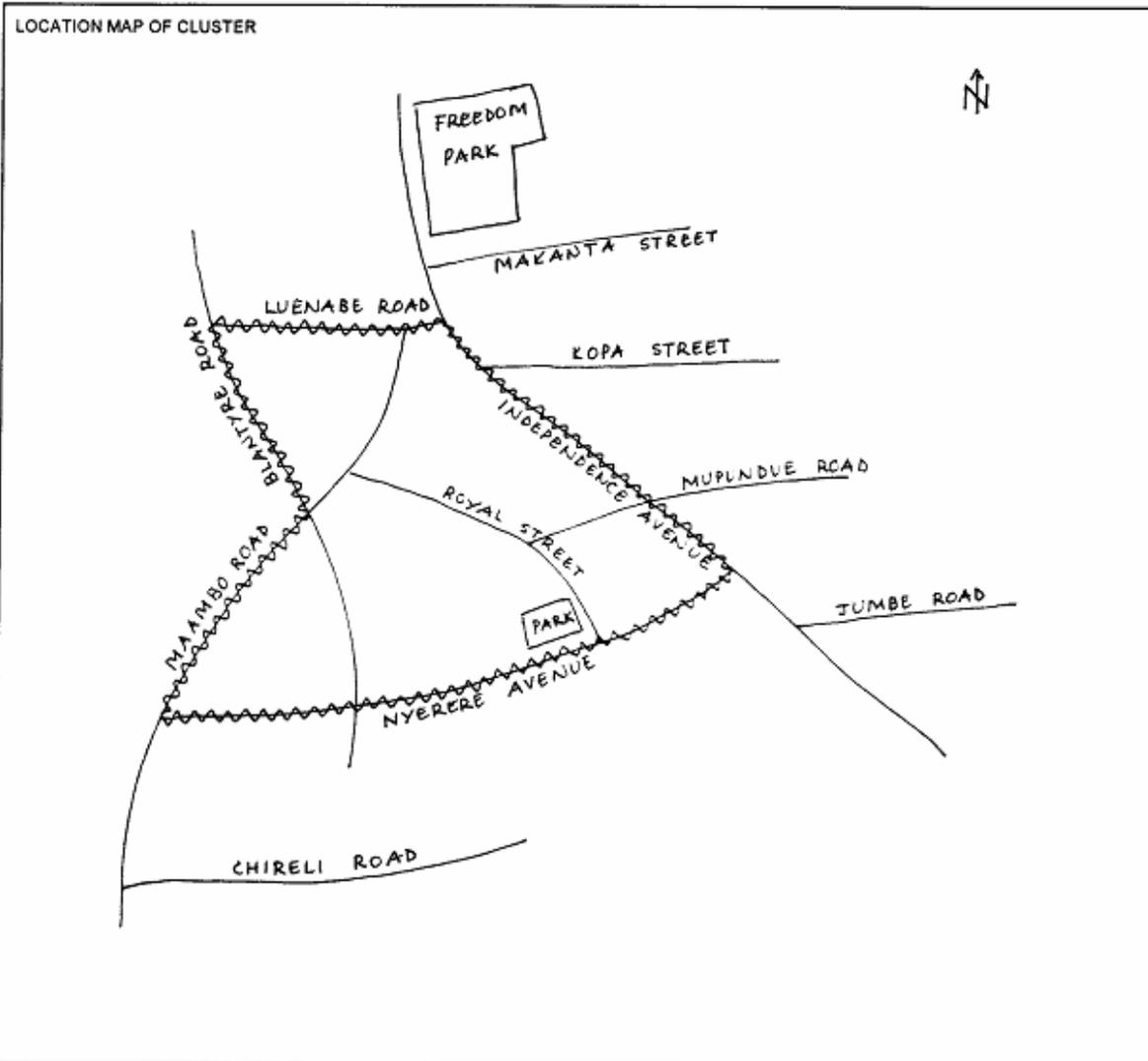
Form AIS/1

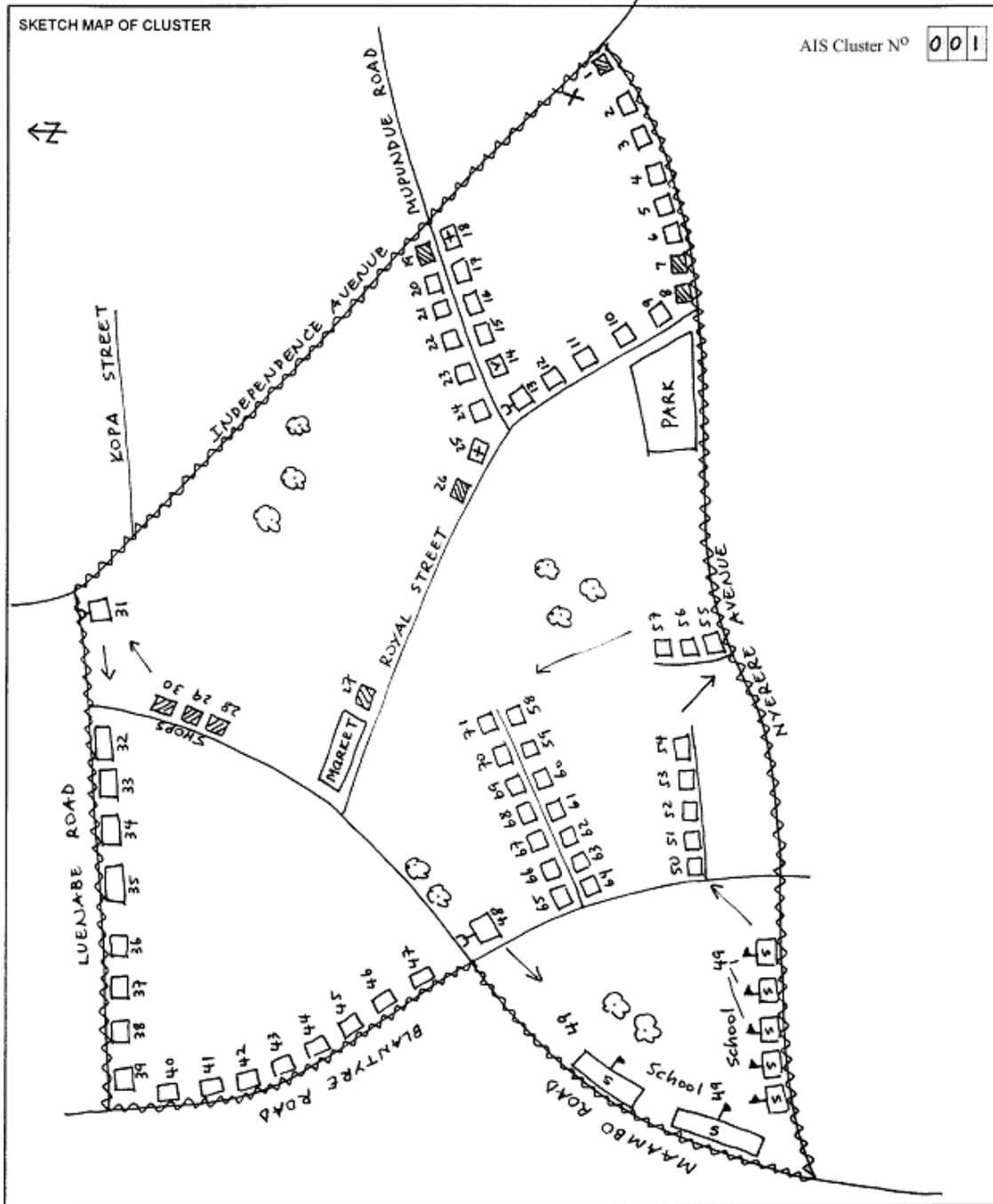
AIDS INDICATOR SURVEY
MAP INFORMATION

Page 1

IDENTIFICATION		
PROVINCE <u>KAYES</u>	PROVINCE CODE <table border="1"><tr><td>1</td></tr></table>	1
1		
DISTRICT <u>DIEMA</u>	DISTRICT CODE <table border="1"><tr><td>04</td></tr></table>	04
04		
TOWN/VILLAGE <u>DIEMA</u>	TOWN/VILLAGE CODE <table border="1"><tr><td>02</td></tr></table>	02
02		
NAME OF MAPPER <u>Harrison Sidibe</u>	CLUSTER CODE <table border="1"><tr><td>017</td></tr></table>	017
017		
NAME OF LISTER <u>John Melaku</u>	DHS CLUSTER N° <table border="1"><tr><td>001</td></tr></table>	001
001		

OBSERVATIONS:





AIDS INDICATOR SURVEY
HOUSEHOLD LISTING FORM

Form AIS/2

LEAVE BLANK		SERIAL N° OF STRUCTURE (1)	ADDRESS DESCRIPTION OF STRUCTURE (2)	RESIDENCE Y/N (3)	SERIAL N° OF HOUSEHOLD IN STRUCTURE (4)	NAME OF HEAD OF HOUSEHOLD (5)	OBSERVATIONS (6)
HH TO INTERVIEW	HH NUMBER						
		1	Nyerere Avenue	N			Pharmacy Star
		2	6 Nyerere Avenue	Y	1	Biane Obote	
		3	8 Nyerere Avenue	Y	1	Eugene Kariba	
					2	Borothy Uchi	
		4	10 Nyerere Avenue	Y	1		No one at home
		5	12 Nyerere Avenue	Y	1	Sam Louwa	
		6	14 Nyerere Avenue	Y	1	Hamison Caubibali	
					2	Paul Liande	
					3	Harry Fiwale	
		7	Avenue Nyerere	N			In construction
		8	Nyerere Avenue	N			In construction
		9	22 Royal Street	Y	1	George Sidibi	
		10	20 Royal Street	Y	1		Refused
		11	18 Royal Street	Y	1	Chief Feidou	
		12	16 Royal Street	Y	1	Ann Tonde	
		13	Mupundue Road	N			Mosque
		14	4 Mupundue Road	N			Vacant
		15	6 Mupundue Road	Y	1	Suzanne Ibenga	
		16	8 Mupundue Road	Y	1	David Chouta	
					2	Joseph Lupiya	
		17	10 Mupundue Road	Y	1	Eleni Fahmi	
		18	10 ^A Mupundue Road	Y	1	Doctor Tadesse	Home upstairs, clinic downstairs

XII. APPENDIX 3. EXAMPLE OF SEGMENTATION FORM

Form AIS/3

AIDS INDICATOR SURVEY
SEGMENTATION FORM

IDENTIFICATION				
PROVINCE <u> KOULIKORO </u>	PROVINCE CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;">4</td></tr></table>		4	
	4			
DISTRICT <u> DIOLA </u>	DISTRICT CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">2</td></tr></table>	0	2	
0	2			
TOWN/VILLAGE <u> DIONGAGA </u>	TOWN/VILLAGE CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">6</td></tr></table>	0	6	
0	6			
NAME OF MAPPER <u> WOLDE CONATE </u>	CLUSTER CODE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">2</td><td style="width: 20px; height: 20px;">3</td></tr></table>	0	2	3
0	2	3		
NAME OF LISTER <u> ANDRE LUENA </u>	AIS CLUSTER N ^o <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">1</td><td style="width: 20px; height: 20px;">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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