

MOGADISHU INFRASTRUCTURE MAPPING EXERCISE

GENERAL BACKGROUND MOGADISHU

There is little reliable statistical information on IDP population figures in Mogadishu. However, rough estimates in 2009 indicated a population of 1.4 million, which increased to approximately 1.76 million in 2013, on account of natural population growth and the population influx due to the drought and conflict, as well as rural–urban migration.

Somalia is at or near the bottom of most global indices of poverty. In Mogadishu, 43 % of the population lives in extreme poverty (per capita income less than USD 1 a day), while 73% live in general poverty (per capita income less than USD 2 a day). The unemployment rate is 47 percent; life expectancy is 47 years; the adult literacy rate is 19 percent; and the proportion of population with access to safe drinking water is estimated at only 23 percent.¹

Reports, surveys, and profiles on IDPs and urban poor in Mogadishu exist, however its usefulness beyond the specific objective pursued remains limited, particularly because different methodologies were used and different target groups targeted. Estimates of IDPs in Mogadishu range between 200,000 and 370,000, with an average household size between 6 and 7.4 members. According to ICRC survey of May 2012, there were some 61'500 households (corresponding to 369,288 IDPs) living in IDP settlements spread out over the 16 districts of Mogadishu. More than 60% of the IDP settlements and 55% of the total IDP population of Mogadishu were concentrated in just three districts: Hodan, Dharkenley and Wadajir². Population movements have continued since. An estimated one-third of all IDPs in Mogadishu, approximately 108,000 people (or 18,000 households), have lived in long-term protracted displacement relying on humanitarian assistance. The other two-thirds of Mogadishu's IDP population represent approximately 40,000 households or 14 percent of the estimated population of Mogadishu.

Early 2013, the Somali Government initiated a relocation plan. The humanitarian community worked closely with the authorities to ensure that the relocation was conducted in a dignified way using a rights-based approach. Due to problems related to achieving security benchmarks and the tenuous security situation in Daynille, the relocation never took place. Instead, forced evictions increased again. Most of the evicted people have settled in spontaneous IDP settlements between km7 and km13 along the Mogadishu-Afgooye road.



To have a better understanding and overview of the situation of the IDPs in the km7-km13 area, REACH conducted an inter-cluster assessment in this area in December 2013. The household estimations were derived from comparison with UNOSAT imagery captured in June 2013. In total approximately 107.009 and 71.770 persons were captured in Darkhenley and Daynille district respectively³. The following two satellite imageries show the growth of IDP settlements in the area of KM 7-KM13. A primary finding was that settlements in KM7-KM13 have

¹ UNHABITAT, Strategy Paper IDP relocation in Mogadishu and ICRC, Mogadishu IDP survey April 2012

² ICRC Mogadishu IDP survey April-May 2012

³ REACH Tri-Cluster Review December 2013 Mogadishu KM7-KM13

increased, while some settlements in town have closed or reduced in size, primarily on account of forced evictions. The yellow portion shows the new settlements that have emerged and the red shows the remaining areas where IDPs are still seen on the satellite imagery of August 2013.

Mogadishu IDP numbers

As mentioned, the last IDP head count exercise that was done was in April-May 2012 by ICRC (369.000 people). Based on the REACH capture of an estimate of 177,000 persons in K7-K13, an estimated maximum of 200.000 people possibly remain in the centre of Mogadishu (including camp 77). There is a strong need to provide an update on the locations of the existing IDP settlements and secondly, what kind of access they have to basic services.

MAPPING INFRASTRUCTURE EXERCISE MOGADISHU

In the last quarter of 2013, the SC with private sector support, developed an information management system through the use of innovative technologies. The main objective of the infrastructure mapping tool is to provide a reliable, useful and timely overview of the living conditions of the IDPs, inclusive their access to basic services. The mapping exercise was successfully piloted in Kismaayo, Baidoa, Jowhar, Bossaso, Gaalkacyo and Garowe⁴.

The Shelter Cluster's infrastructure mapping exercise will provide the humanitarian agencies with a snap shot of the existing infrastructures in Mogadishu's IDP settlements (pictures, GPS and visual findings) and thus restate infrastructural fact at a certain point in time.

As there have been major changes since the REACH assessment (September-October 2013), it was jointly decided by UNHCR and the Shelter Cluster to roll out the mapping exercise for the whole of Mogadishu, including km7-km13.

ANALYSIS and DISSEMINATION

The Shelter Cluster will work closely together with the IM colleagues of both UNHCR and UNOCHA to provide a full analysis of the data. Information will be disseminated after approval of all stakeholders. The following documents are attached to this document:

Annex 1: Concept note for infrastructure mapping exercise

Annex 2: Step by Step guide to the mapping exercise

TIMEFRAME, LOGISTICS and CONSTRAINTS

The exercise will be mapping out all IDP settlements in Mogadishu. The former estimate of ICRC (369.000 persons) will be used as a planning figure. In order to implement this exercise, 10 teams (1 Teamleader, 4 enumerators) are required for 20 days⁵. Cluster partners will provide the 10 teamleaders as well as transportation for the exercise.

The exercise will run through the month of April, following a training of the teamleaders and the enumerators. It will first be piloted in one district to incorporate lessons learned before rolling out the exercise in other districts.

⁴ <https://www.sheltercluster.org/Africa/Somalia/Pages/Somalia-Maps.aspx>

⁵ To map out approximately 300 households (1800 persons at an average of 6pers/HH), a team consisting of a team-leader and 4 enumerators would be necessary during one day.

40 phones will be necessary to implement this exercise. REACH has accepted to provide support to the exercise with 25 phones. The Shelter Cluster also has access to 6 phones in Mogadishu. 9 phones are still lacking and it will be necessary to get in contact with NRC to ask for their contribution.

As the exercise demands full-time commitment of the persons who are capturing the data, UNHCR will pay the team-leaders and the enumerators. It will be important to work together with the programme unit of UNHCR in regards to payment modalities.

There will be a series of trainings/workshops to provide support and guidance to this exercise:

What	When	Where	Constraints
Training of team leaders	8 th of April (Tuesday)	MIA	FULL DAY: This will be an exercise on GPS and mobile technology. The training will be held at the SKA with lunch and refreshments provided for 13 people. IMPORTANT: access to internet.
Training of enumerators	9 th of April (Wednesday)	Office Shelter cluster partner, Peace hotel or other	FULL DAY: This exercise will be done outside the MIA. Nurta to confirm location. In total, 40 enumerators, 10 teamleaders and REACH support staff will participate. IMPORTANT: access to internet.
Testing of the mapping exercise in one district	10-16 th of April (Thursday to Tuesday)	FIELD	Transport will need to be arranged by the Cluster partners.
Workshop on the testing phase.	21 st of April (Wednesday)	MIA	FULL DAY After one week of data capture, Lauren or Martijn will provide support in analysing the data together with the teamleaders. IMPORTANT: access to internet.
Capturing of all data	22 April-12 th of May	FIELD	Transport will need to be arranged by the Cluster partners.
Workshop on analysis in team	20 th of May (Tuesday)	MIA	ONE FULL DAY: workshop on the analysis of the captured data Martijn Goddeeris and Lauren to facilitate the workshop.

BUDGET

The cost is estimated at 22,285 US dollars, which will be contributed by UNHCR.

What	Quantity	# of units/days	Unit Cost	Total Cost	Comments
Team Leaders	10	24	20	4,800\$	Team Leaders will be contributed by the following agencies: DBG, ACF, WOCCA, DRC, NRC, HINNA, ORDO and WAMMY. UNHCR and REACH will also contribute to the exercise through the implementing agencies. To be directly paid to the teamleaders on a bi-weekly basis through Dahabshill.
Enumerators	40	20	15	12,600\$	To be directly paid to the enumerators on a bi-weekly basis through Dahabshill.
Transport	10	20	No cost	No cost	The partners have agreed to cover the transport costs.
Training Hall at SKA (MIA)	1	3	200	600	To be paid directly to SKA/MIA.
Training Hall (enumerator)	1	1	150	150	Training hall for the enumerators will be booked by Nurta (150 dollars)
Refreshments during full day workshops with teamleaders	13	3	55	2,145\$	To be paid directly to SKA/MIA. 3 full days
Refreshments and lunch during training	54	1	25	1,350\$	Lunch including refreshments will cost 25 dollars/person/day. To be paid directly to the hotel.
Transport costs for Martijn to Mogadishu	2	1	98	196\$	Only transport costs provided to Martijn
Transport costs and accommodation for Lauren 2 nights	1	1	444	444\$	Only transport costs and per diem provided for 2 nights to Lauren
Total				22,285\$	

ANNEX 1: CONCEPT NOTE INFRASTRUCTURE MAPPING TOOL

GENERAL BACK GROUND, OVERALL OBJECTIVES AND OUTPUTS

As the Shelter Cluster is a highly IDP focused cluster, the infrastructure mapping exercise would provide the humanitarian agencies with a snap shot of the existing infrastructures in an IDP settlement. The infrastructure mapping exercise is NOT an in-depth analysis or an in detail sectorial assessment. It would only provide a snapshot of the infrastructures (pictures, GPS and visual findings). As non-technical staff will capture the information, the questions need to remain simple and the enumerators will capture the information through direct observation. The mapping tool has gone through approval with the ICWG. The protection, wash, health, education and nutrition cluster provided their inputs.

The general objective of the mapping exercise is to provide a reliable, useful and timely overview of the living conditions of the IDPs, inclusive their access to basic services. The specific objectives of the exercise are:

- To provide data on the size of each settlement including an approximate density per settlement
- To provide baseline information of the IDP settlements: demographics, intention in the next three months...
- To provide an overall view of the access that IDPs have to basic services: latrines, water points, education facilities, health facilities...
- To provide detailed information on evictions

With the information provided, the Shelter Cluster will be able to produce on-line maps⁶ and fact sheets per settlement⁷.

GENERAL METHODOLOGY

The infrastructure mapping exercise targets mainly existing and newly developed IDP⁸ settlements in all Somalia. Most information will be taken through focus group discussions and by direct observation. The proposed methodology has been designed taking into consideration:

- The need to obtain reliable and statistically valid information, which are all GPS tagged
- The need to avoid duplication by ensuring to consider information already available
- The opportunities to use innovative technological solutions to overcome some of the challenges and limitations.

Different sources of information will be used to capture all data:

- A comprehensive desk review of the existing available information related to the objectives of the exercise will be conducted, including a review of the former maps of IDP settlements⁹.
- Focus Group Discussion: for each IDP settlement a focus group discussion will be held before the mapping exercise. The FGD should be comprised of both male and female representatives of the community.
- Full infrastructure mapping exercise through direct observation: to obtain reliable data on access to basic services, a full mapping exercise will be done in the selected IDP settlements.

⁶ https://mapsengine.google.com/map/edit?mid=zDc8RYJLZryw.kdd0EPy6iF_k

⁷ See annex SIMS mapping exercise.

⁸ Definition of IDP: *Any person who has been forced or obliged to flee or leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human made disasters, and who have not crossed an internationally recognized State Border.*"

⁹ See REACH Shelter Cluster Reviews.

This will include the mapping of latrines, water points, community centres, health posts, schools, markets, kiosks, police posts, garbage collection points, solar lights and mosques. Density checks and a perimeter of each settlement will be included in this exercise.

WORK PLAN AND ACTIVITIES

A. PREPARATORY ACTIVITIES

During the preparatory phase of the exercise, the main activities concentrate around establishing a coordination platform, with a clear identification of roles and responsibilities and raising awareness around the exercise. If the exercise is done outside the general cluster system, financing modalities need to be defined.

- Data collection tools are ready and have already been contextualized, piloted and tested in Baidoa, Kismayo, Gaalkacyo, Garowe and Bossaso.
- Set up a coordination forum in conjunction with UNOCHA and other agencies (LNGO/INGO) in forming the data collection team. It would be good that UNOCHA is always involved in the process as this exercise is a multi-sectorial approach. This will ensure that the data is collected jointly and everybody is part of the process.
- Coordinator is identified to lead the process (this would be the Shelter Cluster Coordinator if led by the Shelter Cluster)
- Final desk review done and information uploaded on the mapsengine Shelter Cluster platform.
- (if not a Shelter Cluster activity): work plan and budget finalized (in general, full-time staff of NGOs/INGOs/UN will not be paid a daily allowance)
- Enumerators and team leaders identified
- Training of the enumerators and team leaders
 - Choose a settlement where you want to pilot the mapping exercise. Prioritize areas where information is lacking or link the exercise to a concrete project (and follow-up with a needs assessment).
 - Collect all secondary data in advance (HGA, former assessments, former distributions...)
 - The group leader should inform the community about the exercise and he should set up a meeting one day in advance.
 - Agree upon the spelling of the settlement name. For example: Agree that Ajuran is spelled this way. Otherwise you will get the following data: Ajuuran, Ajuraan,...

B. DATA COLLECTION

Data collection is a crucial phase of the exercise. As described, three main methods will be used: desk review, focus group discussion and infrastructure mapping through direct observation. It will be further important to organize information campaigns to the different stakeholders prior to the deployment of the teams, including the District Commissioners, local authorities and the settlement leaders. The objectives of the exercise need to be clearly communicated.

For each different mapping of a settlement, there will be a team leader and two pairs of enumerators. Enumerators will work in pairs especially in high-security environments (ex Mogadishu) to increase their protection. The Focus Group Discussion will be led by the team leader and will be held at safe, neutral locations. The team leader will further provide guidance to the enumerators in defining their respective area of mapping.

C. DATA PROCESSING AND MANAGEMENT

The data collected from the mapping exercise is uploaded through mobile technology on the on-line database¹⁰. The Shelter Cluster Information Manager¹¹ will have access to the on-line data and will check for consistency checks to identify presence of missing observations, check cases of internal discrepancies and check questions with high degree of dispersion.

D. DATA ANALYSIS and REPORTING

The Shelter Cluster will lead the data analysis. If additional support is required, UNHCR and UNOCHA information management units will provide assistance. The Shelter Cluster will produce on-line maps¹² and a fact sheet per settlement¹³. The data analysis will be shared with all the stakeholders for comments and further recommendations. After approval by all stakeholders, the data will be disseminated widely to all humanitarian, development and government actors.

Dissemination of information

The infrastructure mapping exercise is an inter-sector tool that was developed by the Shelter Cluster. The tool is in the 'open source' location and is visible to everybody who has access on the platform. Therefore, all data that is collected contains no sensitive information that singles out an individual. The Shelter Cluster will process the data and make on-line maps that will be available to the whole humanitarian community (partnership with google mapsengine)¹⁴.

Disclaimer

All information¹⁵ that is disseminated through the web platform, has been compiled from a variety of sources, and does not represent the view of the UNHCR Representation in Somalia or of any other United Nations agencies or secretariat. Whilst every effort has been made to ensure the accuracy and completeness of the content of the infrastructure mapping exercise, no liability can be accepted for any errors or omissions contained within it. The designation employed and the presentation of the material in the infrastructure mapping exercises do not imply the expression of any opinion whatsoever on the part of the Shelter Cluster, UNHCR and the Secretariat of the United Nations concerning the legal status of any country, region, district, territory, area or of its authorities, or concerning delimitation of its frontiers or boundaries, or regarding its economic system or degree of development.

¹⁰ Mfieldwork

¹¹ The recruitment of the Information Manager for the Shelter Cluster is approved (EDA mid March)

¹² https://mapsengine.google.com/map/edit?mid=zDc8RYJLZryw.kdd0EPy6iF_k

¹³ See annex SIMS mapping exercise.

¹⁴ See link for Baidoa https://mapsengine.google.com/map/edit?mid=zDc8RYJLZryw.kdd0EPy6iF_k

¹⁵ This includes but is not limited only to the infrastructure mapping exercise.

ANNEX 2: STEP BY STEP GUIDE TO THE MAPPING EXERCISE

THE MOBILE APPLICATION FOR MAPPING

The mobile application is very user friendly.

- Click on the “*settlement mapping*” questionnaire to find the infrastructure mapping exercise.
- Click on the questionnaire and the first thing it will do is ask you to capture the exact location through a GPS point (longitude, latitude).

The following questions will use skip logic depending on the choice that you make. The survey is built as one tools with two main decision making questions:

1. What is the purpose of the exercise? This question is crucial for the focus group discussion, as it will provide extra questions if necessary on evictions, protection issues...
2. What are you capturing?
 - a. Focus Group Discussion
 - b. Perimeter
 - c. Density check
 - d. Facility
 - i. Schools
 - ii. Water points
 - iii. etc

After having made a choice, you will only receive specific information regarding that choice. For example, if you choose ‘*capturing a school*’, you will only be asked questions related to schools.

At the end of all questionnaires, the phone will ask you to take a picture. Make sure that you stand far enough from the structure to get a good quality picture.

METHODOLOGY FOR THE MAPPING EXERCISE PER SETTLEMENT

The following methodology is recommended:

Preparation before

1. Ensure to inform the DC of the district on the assessment and when you intend to roll it out. The teamleader and coordinator should take the lead for this and ensure to get written approval to proceed with the exercise. Also ask the DC for contacts of the umbrella leaders (main focal persons in the settlement).
2. Discuss with the lead agencies in the settlements (for example CPD in Daynille, Islamic Relief in Km7-km13) on the current situation and try and collect secondary data, including numbers of the umbrella leaders.
3. Ensure that you have copies of the written approval from the DC to give to the enumerators and teamleaders before going to the field.

Day 1

4. Determine within the settlement, how many sub-settlements there are. Sometimes a bigger settlement is comprised of two separate settlements (no geographical distinction but difference in clan). You will have two separate community leaders. Separate the exercise for the different settlements. Finish one and continue afterwards with the second.
5. Go over the secondary data that exists on the settlement (for example last registration data of last NFI/shelter distribution; last figures of Humanitarian Gap Analysis; REACH data,...). Spend half an hour discussing as a group what is known about the settlement. Make some rough notes on numbers and figures that exist already.
6. The group leader meets with the settlement leader to have a focus group discussion and he will go through the questions related to general information of the settlement (*question A.6 What are you capturing: Discussion with settlement leader*).
 - a. If there are several settlement leaders and the camp is not split up into different settlements, choose only one.
 - b. If the settlement is split up in two sub-settlements, have two separate meetings with the settlement leaders.
 - c. Explain to the settlement leader what the purpose of this mapping exercise is.
 - d. Make sure he answers the question to the best of his knowledge.
 - e. Questions regarding the land ownership and clan dynamics: some of the questions are optional and can be skipped, as they could be considered too sensitive.
 - f. Questions regarding dates: it will be easier to make it multiple-choice/single select (0/1/3/6/9/12/2years...) instead of asking a specific month.
4. While the group leader is talking to the settlement leader the other enumerators go around the boundary of the settlement and capture a perimeter point every 80 steps (*question A.6 What are you capturing: perimeter*). For each point on the perimeter, you will alternately take a picture facing the settlement and one taken away from the settlement.
5. Go back to the office and upload all the points. Look on the web platform of MFIELDWORK and look at the map where the settlement is located.
6. Analyse the information that has been captured with the community leader and discuss the findings.
7. Prepare the teams for the next day (groups per pair). The group leader will be following the enumerators and will monitor the quality of the exercise.
8. Split the settlement into blocks. Use the natural divisions in the settlements (rivers, mains roads, main firebreaks ect). Each pair of enumerators will be assigned to a specific geographic area.

Day 2

1. Return to the same settlement that you captured the perimeter of yesterday.
2. The group-leader matches the teams to their respective assigned section in order that everybody understands which section they should cover.
3. The enumerators will start with the collection of density data (*question A.6 What are you capturing: density*). In the centre of their block, they will capture the location of 20 different households living all in one area (*NOTE* it is important that all 20 households be next to each other in the same section). This will provide us with a representative size and will provide information regarding the density of each different block.
4. The enumerators should capture **all** the communal infrastructure points that exist in their block (question C/D/E/F/G/H/I/J). If there are four different latrines in your section it is important to capture ALL four. For each different sector (latrine, water point, school,...) a maximum of 10 questions will be asked. The enumerators will answer the questions mainly through direct

- observation and as little as possible through a discussion with the community. (*question A.6 What are you capturing: Latrines, Water points, Schools, Medical clinic, Nutritional Centre, Police post, Market, Kiosk, Child Friendly Space*).
5. The enumerators should work in pairs (one person to work on the mobile application and one person to observe and discuss if necessary with the community/doctor/teacher/...
 6. Return to the office and upload all data from phones.

GOOD QUALITY PICTURES (good and bad examples)

EXAMPLES (See presentation)

-A good photo captures the whole infrastructure or as much as possible.

USE OF PHONE AND MFIELDWORK

See manual for mFieldwork.

GENERAL CHECKS BEFORE GOING TO THE FIELD

- If the agencies do not have a log in code, contact the Shelter Cluster Secretariat for access to the website.
- Make sure everyone is logged in with his phone on the MFIELDWORK application before leaving the WIFI area. It is necessary to be logged in when in the field.
- Once you start the mapping exercise turn WIFI off to save battery, as long as you are logged in to the application the data will still upload.
- Make sure the latest versions of all the questionnaires have been downloaded.
- Make sure that the GPS is functional on all the phones. Try this out at the office.
- Organise the team in pairs: one who will be discussing with the household and one who will be using the phone.
- Make sure all the phones are properly charged.

TIPS DURING THE TRAINING

- Do a quick demo on the technology. It demystifies the technology. We will delete these entries later on.
- Review the questionnaire on paper: Everyone can take notes and have the paper with them as reference. Identify changes needed to the form before data collection begins. Ensure everyone understands all questions the same way. Always ask for the latest version.
- Phone training: Demonstrate how to get the phone on the WiFi, how to log into the mobile application, how to upload records, and how to ensure the GPS is working.
- Office practical: Interview each other and do one record each with each tool. You should debrief during and after if they find questions that need changes or if clarification is required.
- Field practical: Go in to the field to collect 1 to 2 records each with each tool. Debrief afterwards by looking at the excel data column by column. Find any errors, places where they have questions, or changes needed to the tool.