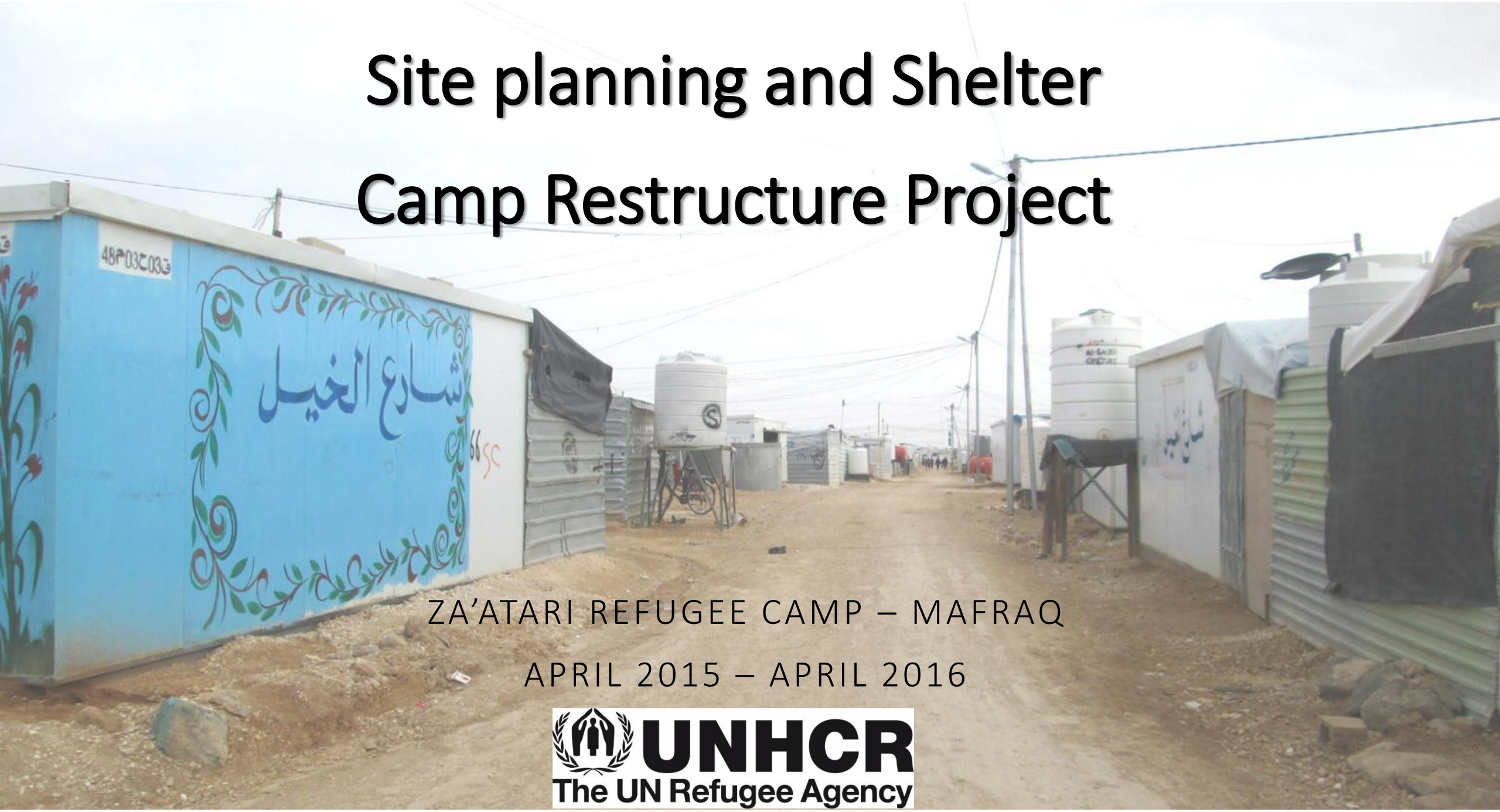
Site planning and Shelter

Camp Restructure Project



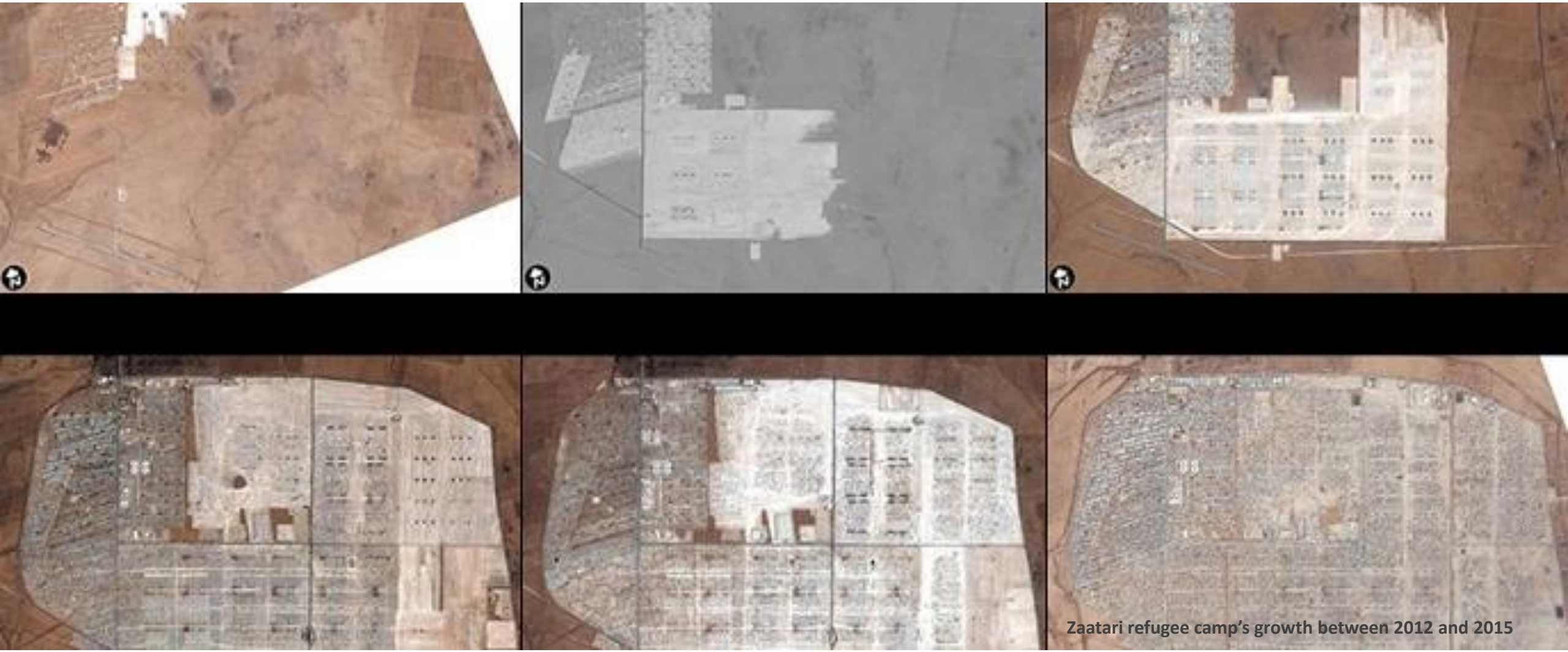
ZA'ATARI REFUGEE CAMP – MAFRAQ

APRIL 2015 – APRIL 2016

UNHCR
The UN Refugee Agency

Introduction

Zaatari Camp was opened in July 2012. A high influx of refugees passed through Zaatari with varying duration of stay causing challenges to shelter allocation and camp structure.



Zaatari refugee camp's growth between 2012 and 2015

An aerial view shows the Zaatari refugee camp on July 18, 2013.

- There are different types of shelter provided in the camp, i.e. tents and mobile caravans.
- Method of pitching tents, distributions and recovery of shelter was not fully systemized from the beginning of the camp establishment.
- Shelter recovery started July 2014 by tracking of refugees leaving the camp.
- Different source of shelter distributions and limited recording/verification.
- Attempt to implement the camp initial master plan and make it visible on the ground.
- Refugees tend to change their location within the camp very frequently and have large household plot with many shelters.

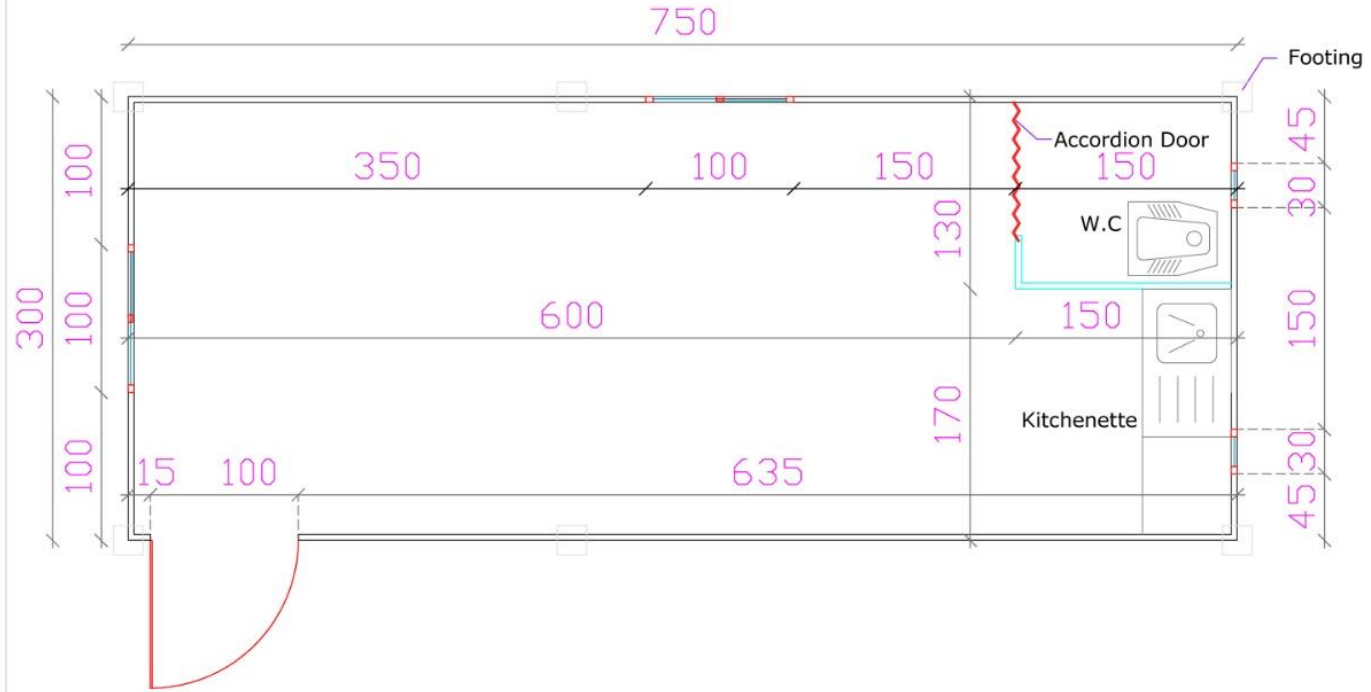
Project Vision

"Camp restructure is an attempt to best utilize the camp space in line with minimum standards and preserve social cohesion to the maximum extent possible."

Methodology

- **Population of Zaatari camp stabilized since opening of Azraq camp. Currently, the camp is home to some 80,000 refugees HH residing in 12 districts.**

- **New shelter design was introduced in January 2015: prefab includes concrete flooring, built-in wash and cooking facilities as in the below layout:**



Methodology

- Needs Assessment and assistance of households through home visits and consultations with refugees.
- Relocation of HH when needed to reflect the camp masterplan skeleton .
- Roll out of address system in the camp and linked to UNHCR file #. An attempt to implement the camp initial master plan and make it visible on the ground.
- Produce as-built plan for the camp: final and accurate layout to be used as camp masterplan.
- Identify full camp capacity and empty plots
- HH will be linked to infrastructure networks, i.e. waste water, water supply, electricity and construction of service roads.

Zaatari Masterplan

UNHCR
The UN Refugee Agency

Zaatari Refugee Camp
MAFRAQ . JORDAN

GENERAL INFRASTRUCTURE

- Assembly point
- Clinic
- Community building
- Diplomatic mission
- Distribution site
- Food warehouse
- Government office
- Health facility
- Health post
- Hospital
- Registration
- Bus Station
- Warehouse
- Youth Center
- Parking Area
- Women Center
- Hotel
- House
- Infrastructure
- Mobile clinic
- Mosque
- NGO office
- Police station
- School
- UN compound/office
- Supermarket
- Children playground
- Gendarmerie
- Sports Center
- Informal Education Center
- Telecommunications Center

WATER, SANITATION & HYGIENE

- Borehole
- Communal latrine
- Latrine cabin
- Potable water
- Potable water source
- Sanitation
- Shower
- Solid Waste
- Spring Water
- Submersible pump
- Toilet
- Water source
- Water trucking
- Well
- Wastewater Treatment Plant

EDUCATION

- School yard + Sports field
- Vocational Trainning centre
- Gendarmerie station

DRAWING DESIGNATION: District 8 - Vacant Shelter Locations
SCALE : To Fit
ARCH/PSP NAME: Mohamed Jertila
Ghada Barakat
MODIFIED DATE : 26/11/2015

Shelter Images

Shelter Images

Assessment Questions

District	Block	REACH Address	Household Area (m^2)	Is this HH inhabited?	Is this HH a compound or single family?	Number of families living in this HH

Private facilities in this HH	Type of shelter (observed)	Number of Caravans (observed)	Caravans: fixed, mobile or both	Number of tents (observed)	Does this HH have an extension/porch?

Main material of extension/porch	Registration number: manual	Name of head of household	Total number of persons with physical disabilities in this HH	Total number of pregnant women this HH	Age of individuals (years)	Gender of individual

UNHCR
The UN Refugee Agency

JORDAN - Al Za'atari Refugee Camp

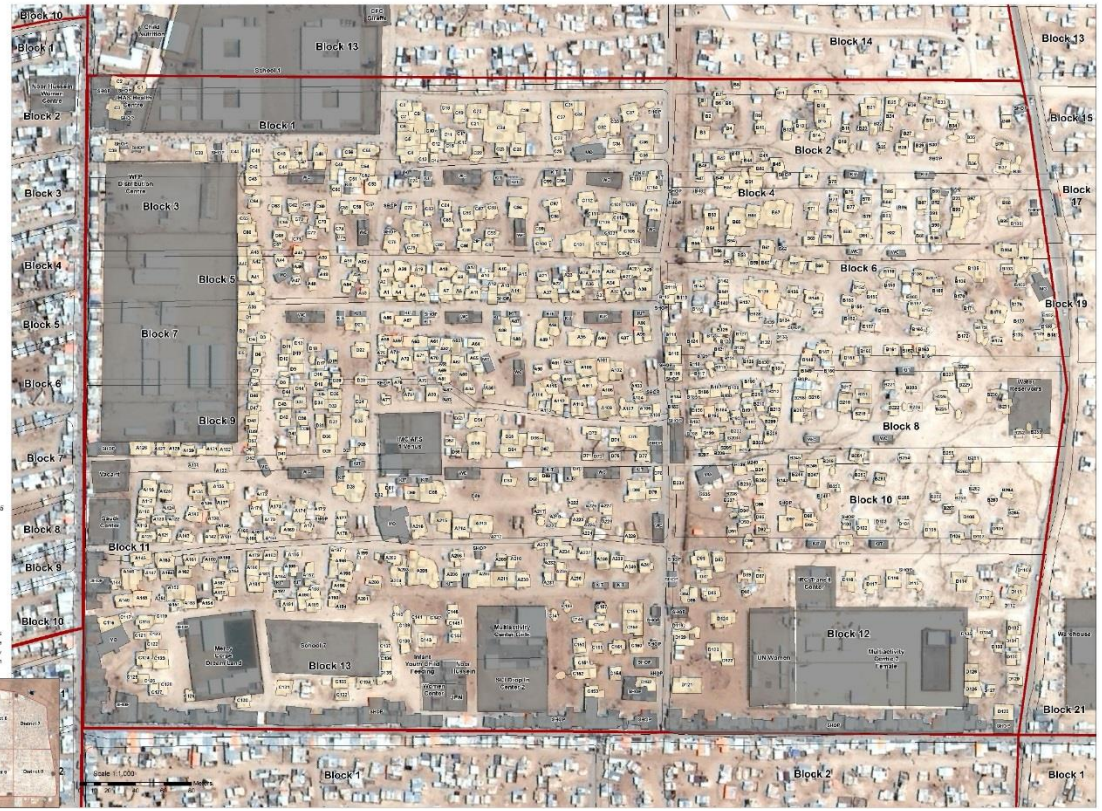
Household Boundaries - District 4 - Blocks 1-13

Not for Circulation

For more information scan to visit the Open Street Map Portal

Facility Type

- Household boundary
- Camp Facilities
- Block Boundary
- District Boundary



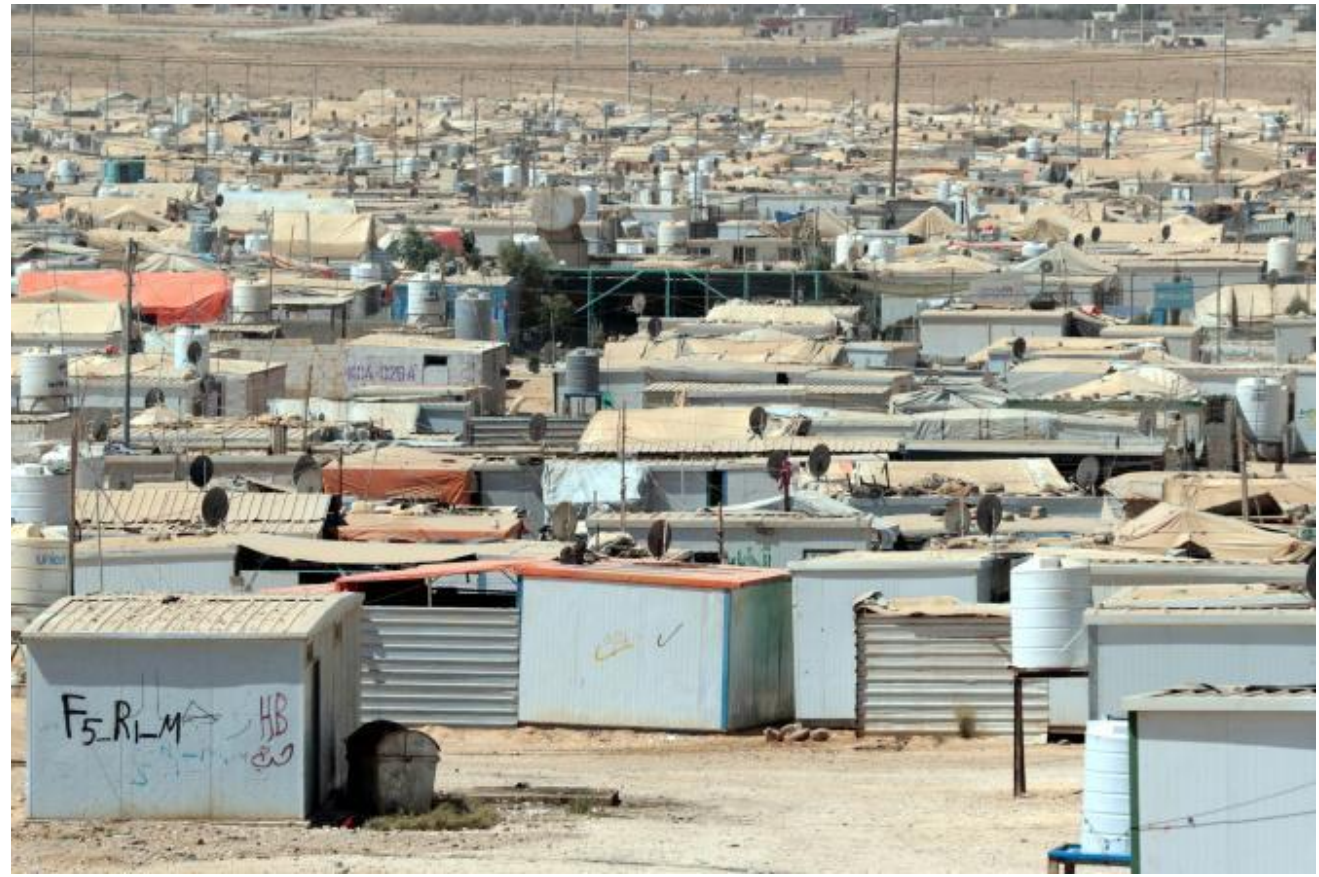
Data Source: HH Boundaries - August 2015

Satellite Acquisition Date: 25/04/2013 by DigitalGlobe Provided by: UNOSAT

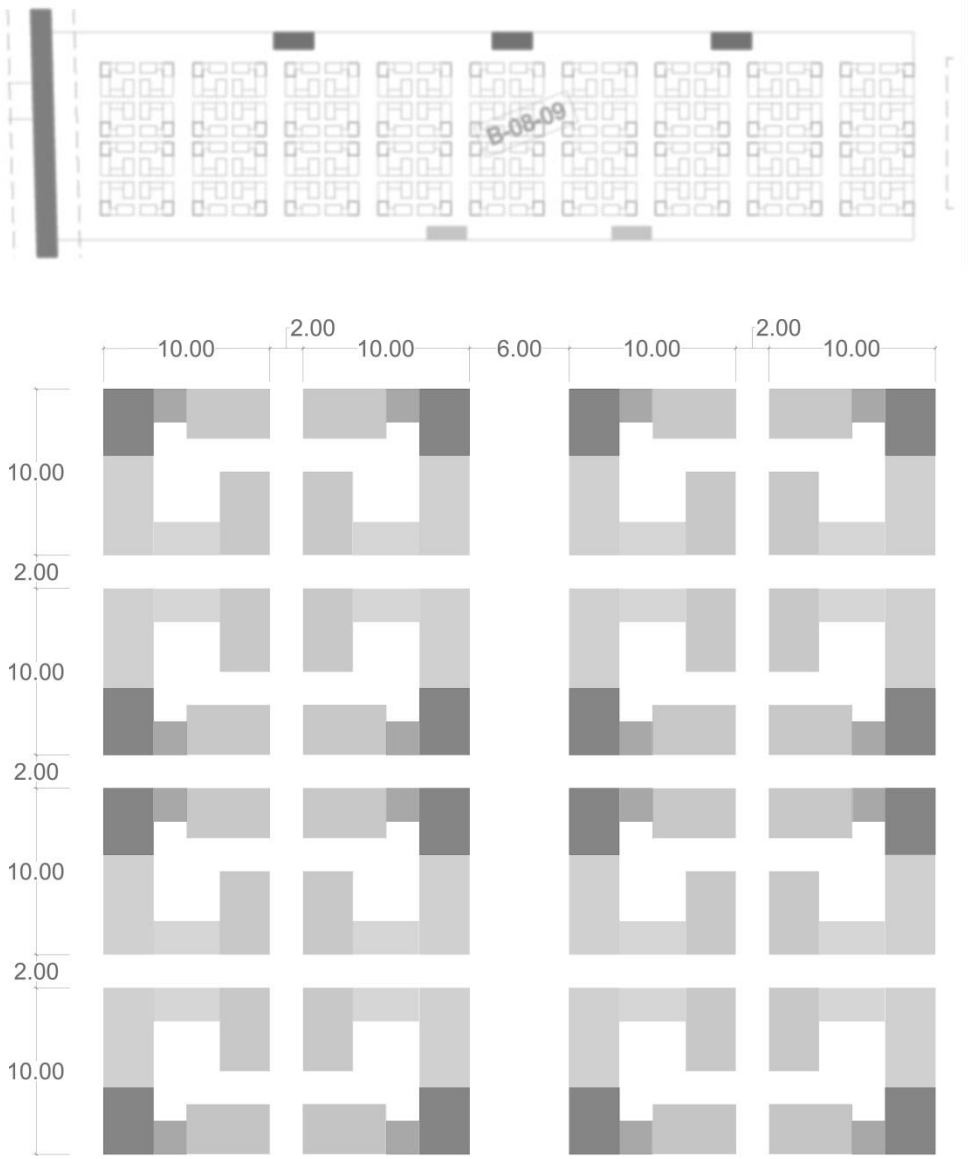
Projection: WGS 1984 UTM Zone 37N

File: JOR_Zaatari_Mgs_HH_D4_B1-13_Nov2015_A1

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by partners, associates or donors mentioned on this map.

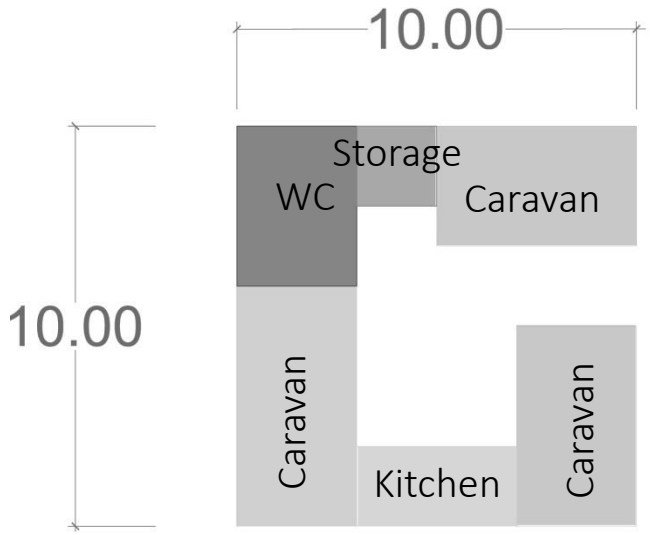


Blocks Layout



Pathways of 6m are left between every column of HH to provide access to services and respond to emergencies.

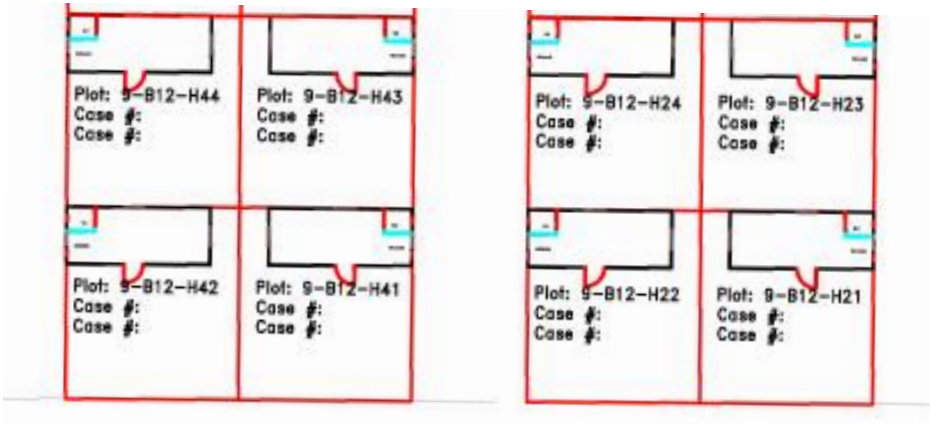
Household Plot:

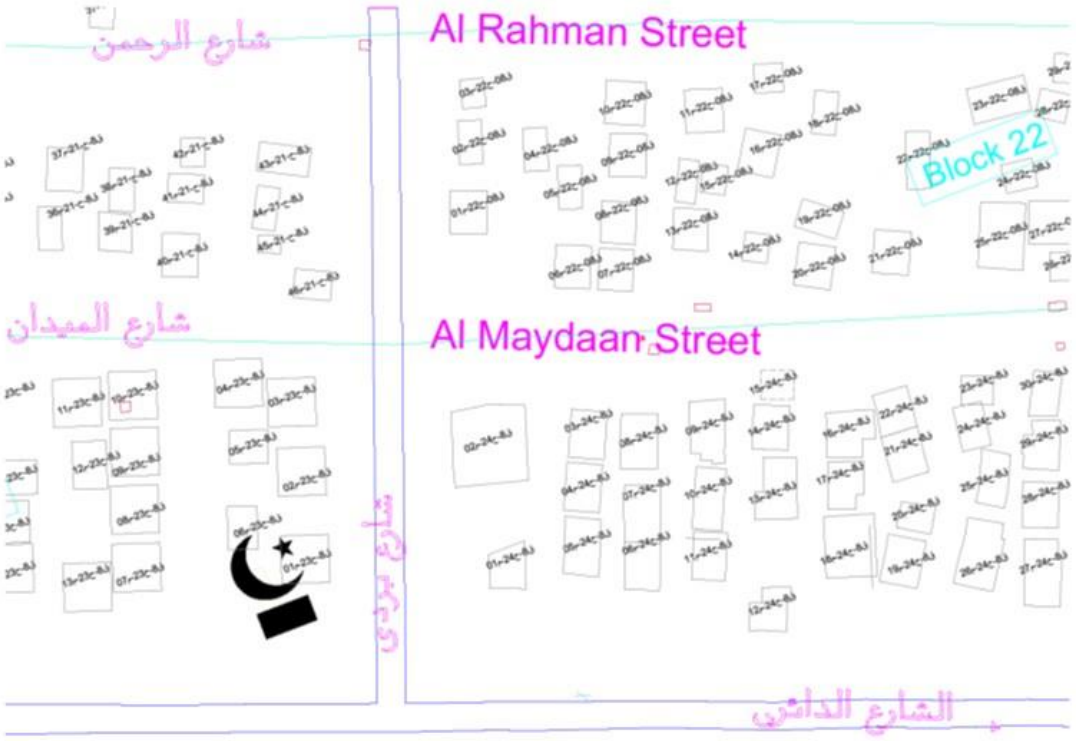


Each HH will have approx. 10x10m plot size to fit their caravans, tents, and installations.

Addressing system

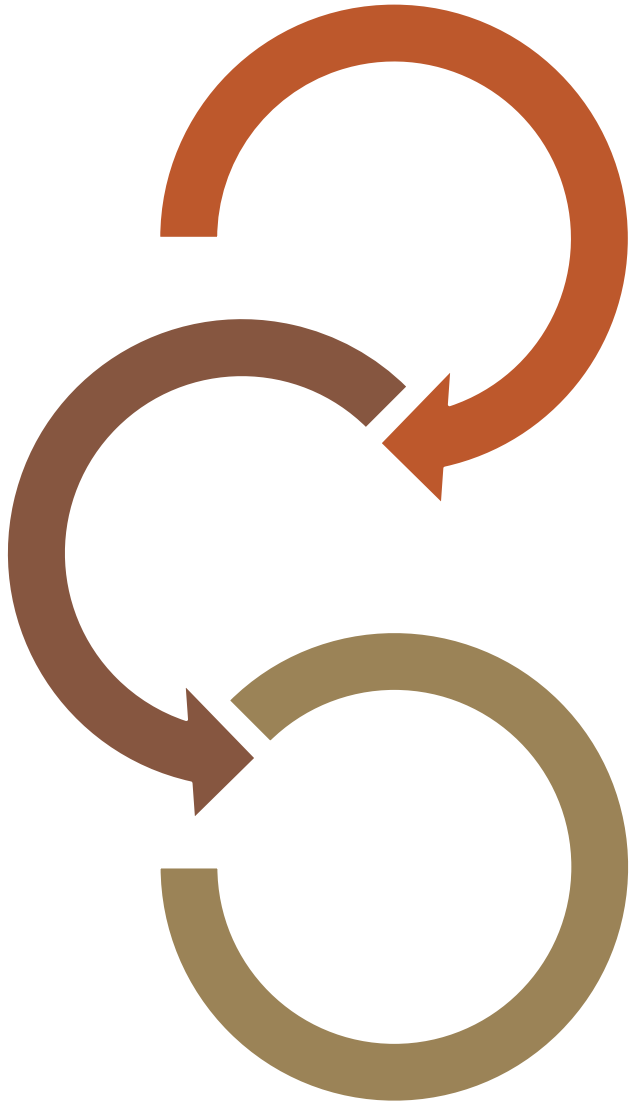
After restructuring and relocation: each HH will have an address number printed that shows district #, block #, and HH #, and street names will be painted on caravan elevations as per the below image:





NRC Responsibilities

- Implementing all the activities which ensure accessibility and security for each Household.
- Represent accurate as-built master plan for the whole Zaatari Camp and its features optimistically.
- Implementing the address system in the camp, including demarcating HH numbers and street names.



NRC Team Duties

1. Households Allocation and Relocation

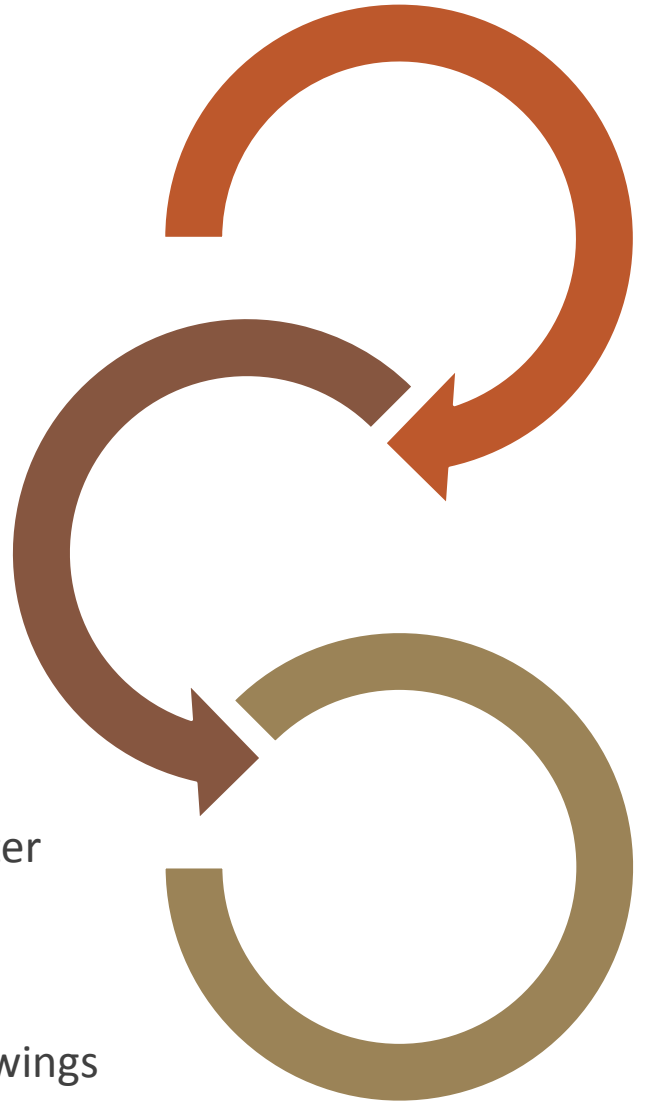
- Implementing relocation plans , activities, messages, resolving any related issues on the site; which ensure accessibility and security for each Household.
- Demarcating prefabricated caravans and its classifications onsite to allocation activities

2. Surveying

- Measuring the distance and angles in order to create the As-built maps after relocation activities

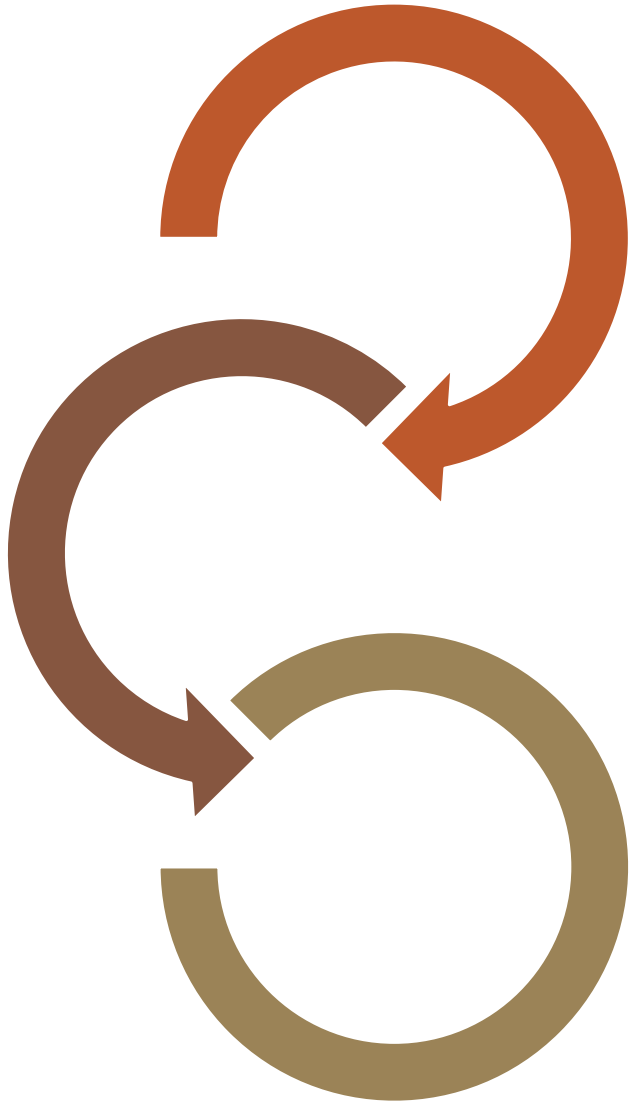
3. Address Planning

- Identifying the address for each household and handing over the final drawings on a specific sequence for address implementation team.
- Drawing the final As-built layouts for each blocks as is approved.



4. Address Implementation

- Installing the address of each HH in the field.
- Demarking the names of each street as provided in the masterplan.



1. Allocation and Relocation Team

1. Recommendation List

- Family Size
- Number of Caravans
- Disability Priority

2. Preliminary Plan

- recommended House-Hold plots
- Irregular House-Hold locations with preliminary suggestions for new locations
- Preliminary service roads (as pre work for infrastructure phase)

3. Messaging

- Supported by community service team

4. Relocation

- On-site
- Minimum damages
- Standards and Regulations

→ “ To guarantee a well sewer service, privacy, and safety for each House-Hold (with minimum damages), in parallel with the project regulations, and demarcate a prefab caravan/s” ←

UNHCR
CPV

Allocating the recommended prefab caravans by RAF, based on Relocation team's updated maps.

5. Updated Maps

- CAD plans for each block, shows the new locations for Prefab, relocated Caravans, and new service roads.
- Daily relocated and allocated caravans' progress
- Prepare tables show the Allocated and Returned Caravans' types (A or B), House-Hold full information, and any back-up notes.

30

2. Surveying Team

→ make exact coordinates, measurements and determine all the household boundaries, and provide data relevant to the shape, location, and dimension of each district, its features, and house-holds on-site ←

1. Find Master Bench-marks

- Based on Handel GPS and existing landmarks

2. Allocating the Global BMs in the camp

- Using Palestinian Grid
- Accuracy less than 1m

3. Specific NRC Surveying Network

- Dividing new benchmarks
- Connect them for a geometric network cover the district
- Accurate produced master plan

4. Surveying As-built Map

- For every caravan and major features in the each block (Easting , Northing)
- Code all the points for the observed features in site
- In coordination with relocation and Address planning teams

NRC
NORWEGIAN
REFUGEE COUNCIL

NRC
NORWEGIAN
REFUGEE COUNCIL

The surveying as-built map with codes for all the points for the observed features in site .

3. Address Planning Team

1. Conduct Final As-built Maps

- Create draft manual drawings
- UN registration number for each Household
- Represent the maps as CAD as-built layout

2. HH Plots Remarking

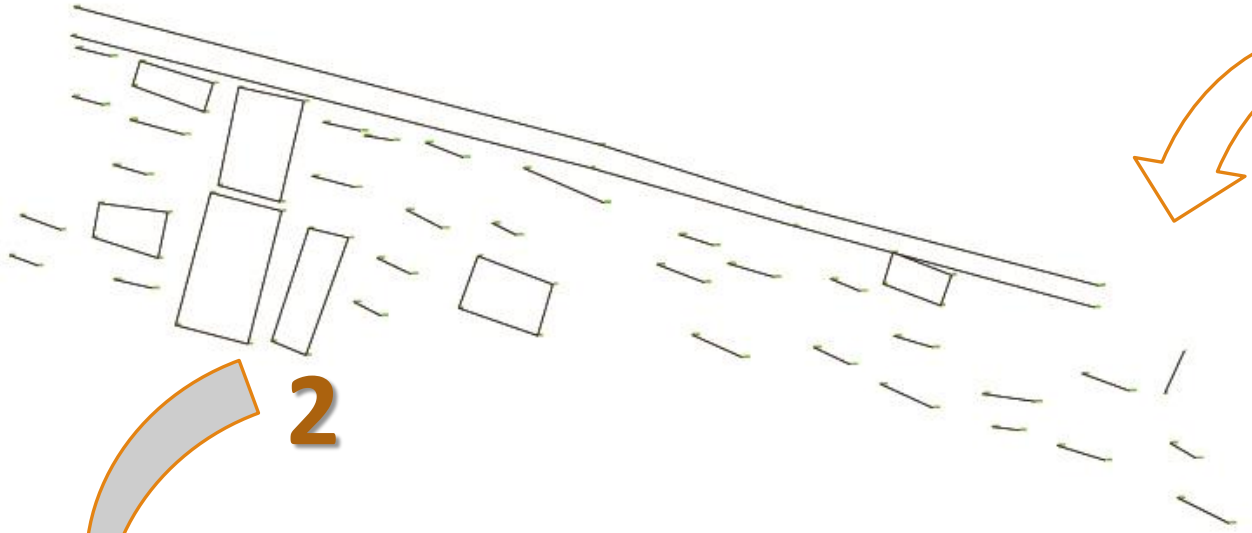
- Specifying the status for each HH/plot (vacant, available, unoccupied)
- Iincludes UN registration number/s

3. Address Identification for each household

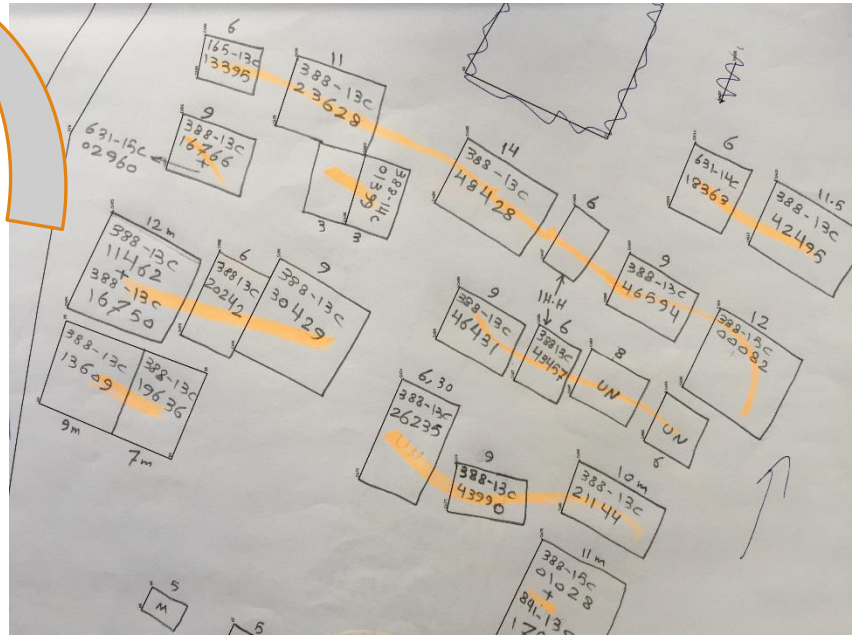
- On a sequence order
- In English and Arabic
- For Implementation Team

Ex: D09 B04 H15

District Number — Block Number — Household Number



1



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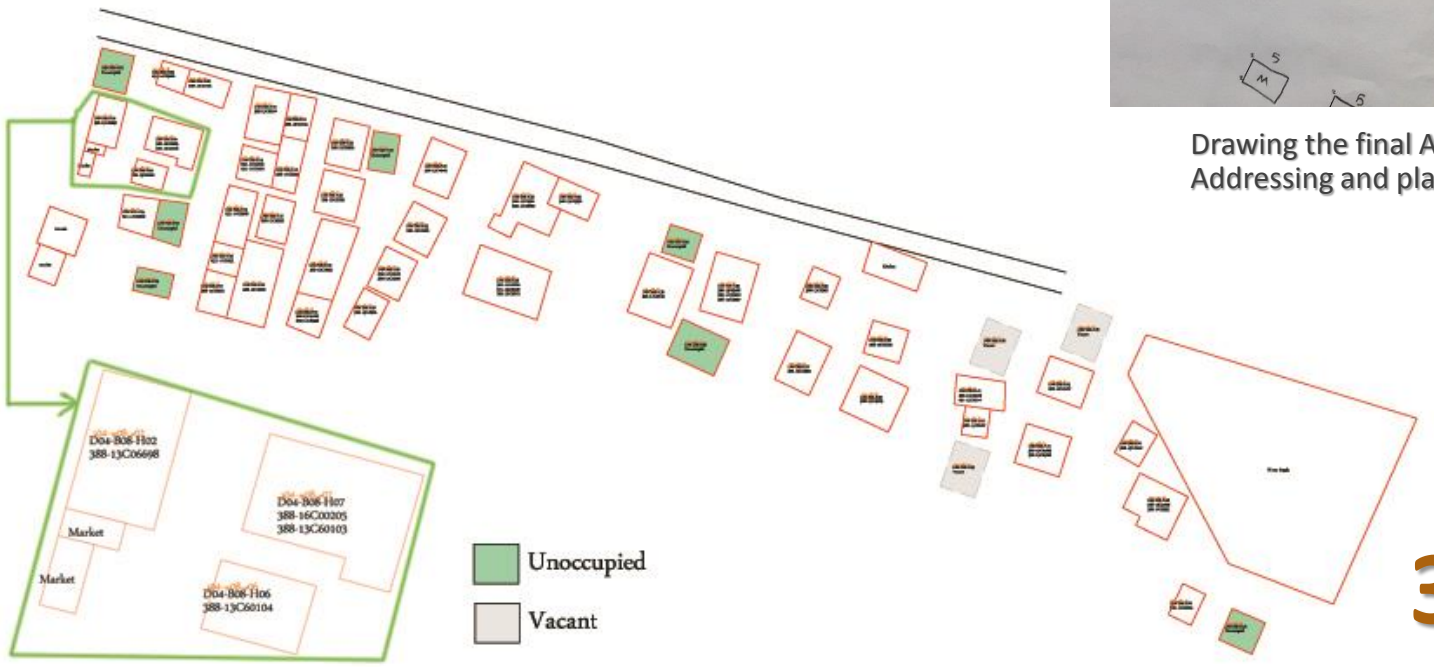


3

Drawing the final As-built layouts process for each blocks – Addressing and planning team

7.5 m
10 m
Available Plots for future and sustainable urban expansion

	A	B	C	D	E	F
1		**Project: Address Roll out for Households**				
2						
3		**Zaatari Camp, Shelter & Site Planning Unit**				
4						
5		District#	**4**			
6		**Block#**	**8**			Unoccuped: presence
7		Date:	25/2/2016			
8	**HH Address (English**	**HH Address (Arabic)**	**Case ID**	**Remarks(Plot occupied / unoccupied/ available)**	**Position X**	**Position Y**
9	D04-B08-H01	ق04-ج08-م01	Unoccupied	Unoccupied	274870.1394	189698.2939
10	D04-B08-H02	ق04-ج08-م02	388-13C06698	Occupied	274868.6392	189687.8730
11	D04-B08-H03	ق04-ج08-م03	Unoccupied	Unoccupied	274877.4910	189654.3158
12	D04-B08-H04	ق04-ج08-م04	Unoccupied	Unoccupied	274881.7978	189666.2679
13	D04-B08-H05	ق04-ج08-م05	631-14C00842	Occupied	274874.4288	189668.5862
14	D04-B08-H06	ق04-ج08-م06	388-13C60104	Occupied	274876.2956	189677.1379
15	D04-B08-H07	ق04-ج08-م07	388-16C00205, 388-13C60103	Occupied	274881.2984	189683.5703
16	D04-B08-H08	ق04-ج08-م08	631-14C03880	Occupied	274880.5742	189697.4642
17	D04-B08-H09	ق04-ج08-م09	388-13C64156	Occupied	274888.1272	189695.5014
18	D04-B08-H10	ق04-ج08-م10	388-13C60174	Occupied	274901.6553	189690.3192
19	D04-B08-H11	ق04-ج08-م11	388-13C64155	Occupied	274907.9041	189687.6430
20	D04-B08-H12	ق04-ج08-م12	388-14C02005	Occupied	274906.0976	189677.2775
21	D04-B08-H13	ق04-ج08-م13	631-14C04724, 631-14C00840	Occupied	274898.9710	189679.3181
22	D04-B08-H14	ق04-ج08-م14	388-13C60102	Occupied	274903.0676	189667.7311
23	D04-B08-H15	ق04-ج08-م15	631-14C00846	Occupied	274895.6723	189669.0809
24	D04-B08-H16	ق04-ج08-م16	631-14C04731	Occupied	274892.7517	189659.4428
25	D04-B08-H17	ق04-ج08-م17	388-15C00622	Occupied	274890.7318	189653.3167
26	D04-B08-H18	ق04-ج08-م18	388-13C40581	Occupied	274899.3163	189653.5329
27	D04-B08-H19	ق04-ج08-م19	388-13C57109, 388-15C00938	Occupied	274910.1816	189647.9960
28	D04-B08-H20	ق04-ج08-م20	388-13C48901	Occupied	274913.0255	189657.6127
29	D04-B08-H21	ق04-ج08-م21	388-13C39136	Occupied	274915.4319	189672.0377
30	D04-B08-H22	ق04-ج08-م22	388-13C32810	Occupied	274917.4737	189682.8200
31	D04-B08-H23	ق04-ج08-م23	Unoccupied	Unoccupied	274925.6264	189681.3074
32	D04-B08-H24	ق04-ج08-م24	388-13C46761	Occupied	274936.7207	189678.0610
33	D04-B08-H25			Occupied	274932.9069	189665.6863
34	D04-B08-H26			Occupied	274927.1157	189656.7281

Summary

4. “Data Extraction”

- CAD drawings to Excel sheets

November 2015

January 2016

Zaatari as-built HH boundary on master plan in progress/ CAD

4. Address Implementation Team

1. Address Installation

- Installing the address of each HH
- Using a special predesigned plates and specific paints
- check the UN registration number and all attached data for each HH

شارع النور
شارع بردى

شارع القصبة
P+225

شارع رشاد
.131

2. Street Addressing

- provided streets maps from UNHCR
- On-Site check for any change
- typing the names of each street

3. Final check-up

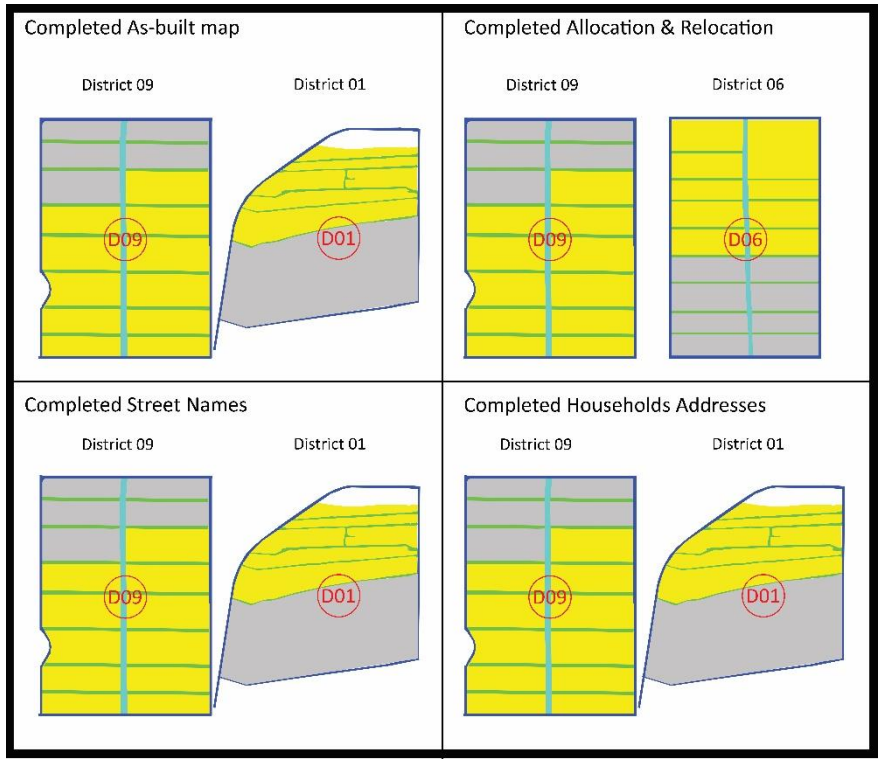
- on site
- for the whole district
- Work submission

Project Challenges & Site Management

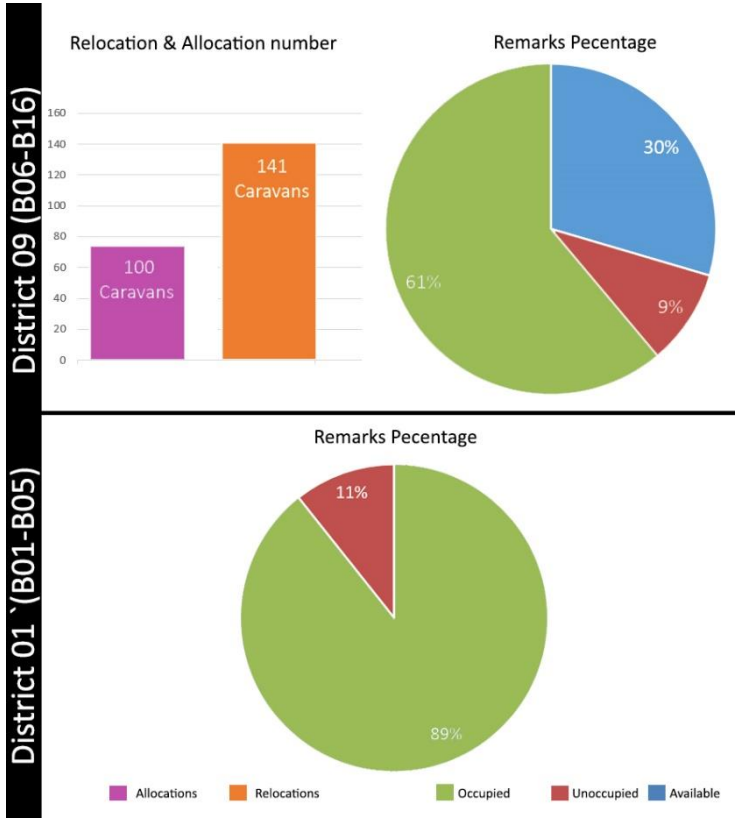
Community accepting and understanding the project actions and activities	• NRC CRT Massaging Support • Coordination with UNHCR field focal points and IRD CMs on site, by community gathering in each district.
Trust problem	•On-site CRT Support •Overall site work – by time
Uncontrolled Caravans movements by individuals	•Coordination with UNHCR field focal points and IRD CMs on site, by community gathering in each district. Addressing System. •Linking HH to infrastructure networks
Base Data and references were not updates to the site	•Multi resource information and data-base in compressing with site
The project covers the whole Zaatari Camp (12 Districts = 5.22 km^2 = more than 14,000 HH)	•Scheduled work plan – and teams cooperation work •Systemize work and development

Project Achievements

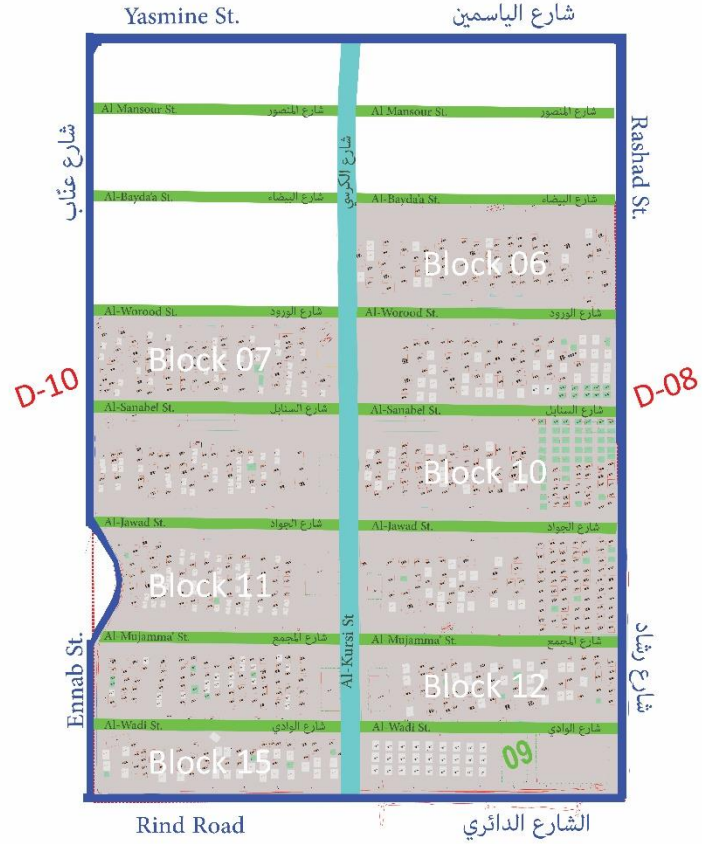
1- Project Progress Documentation



Work Progress master plan/s

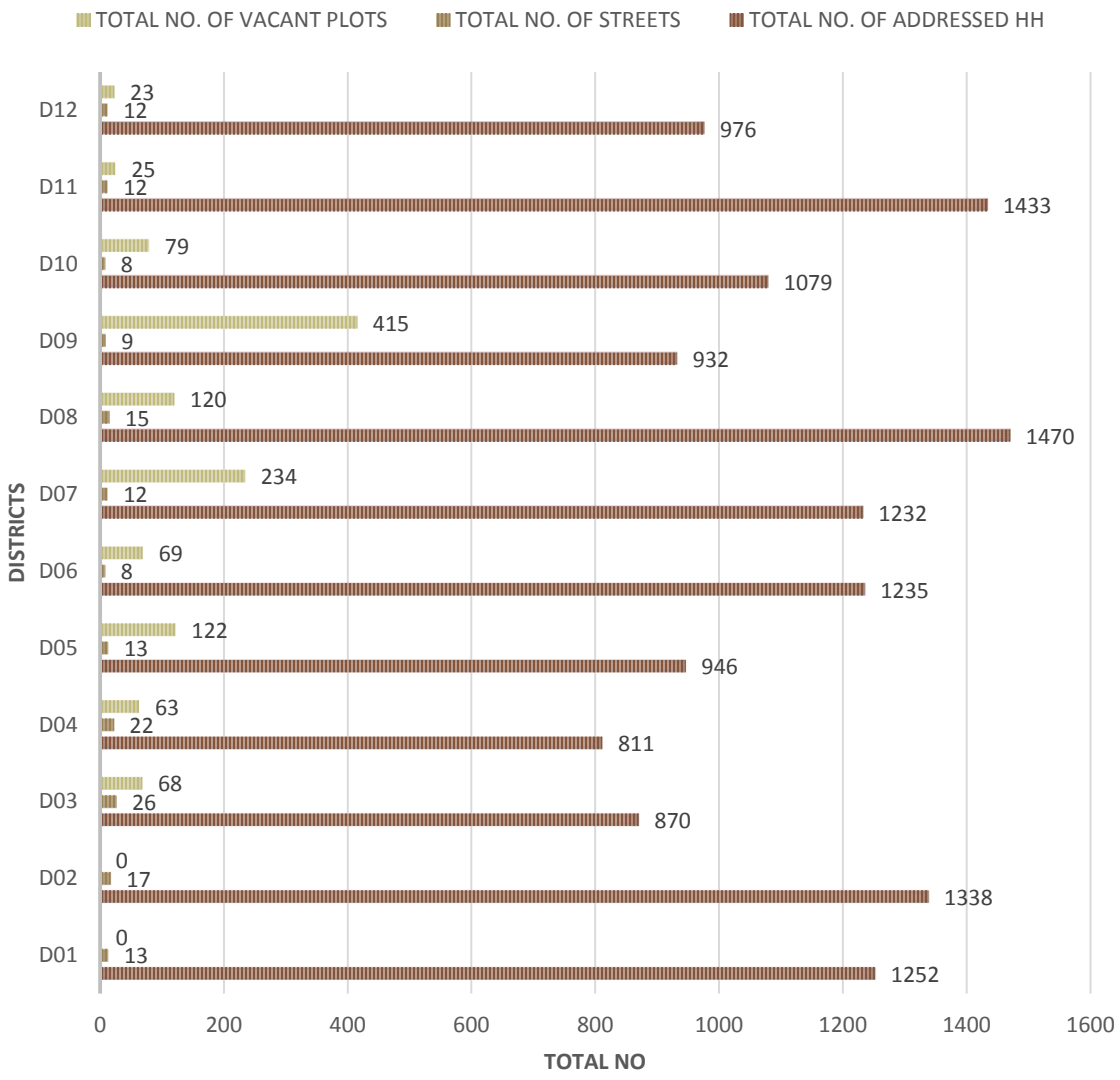


Cumulative Quantities Diagrams

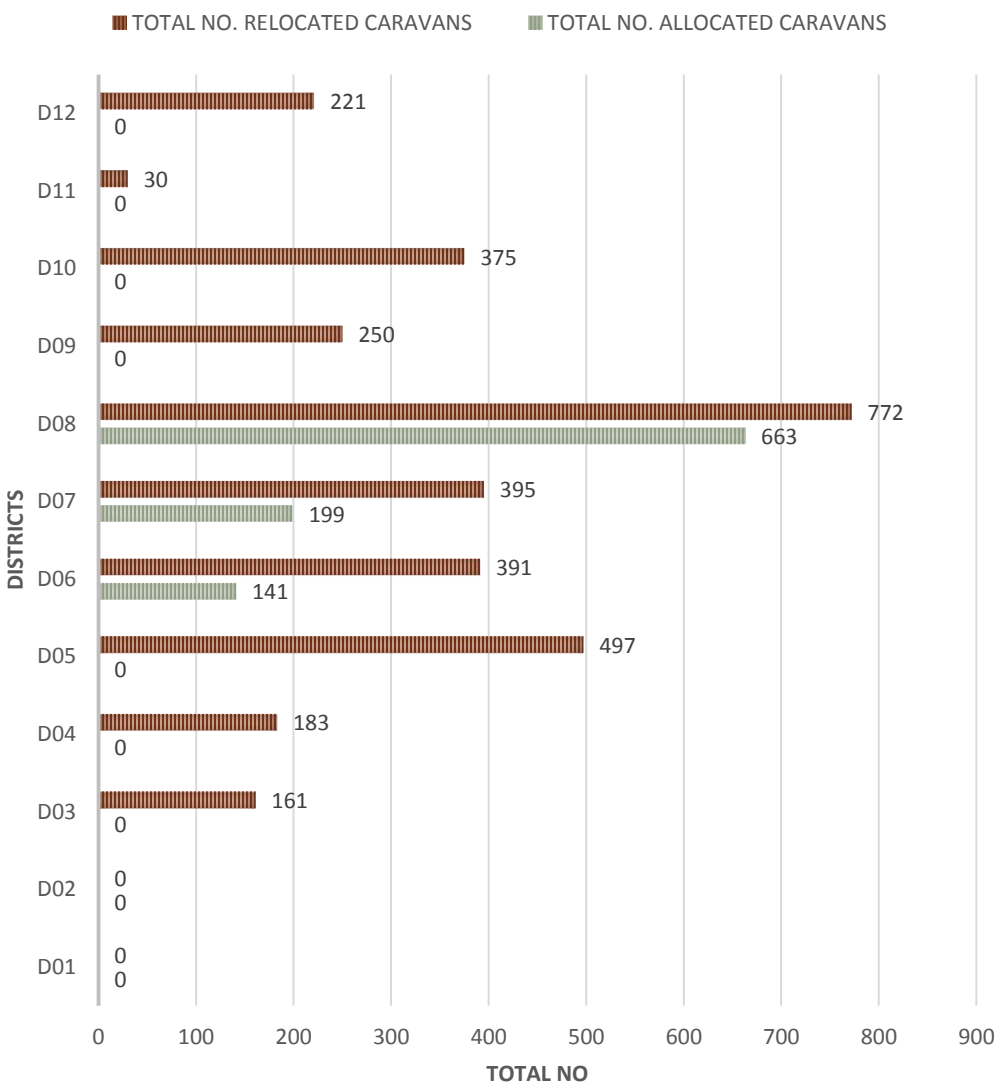


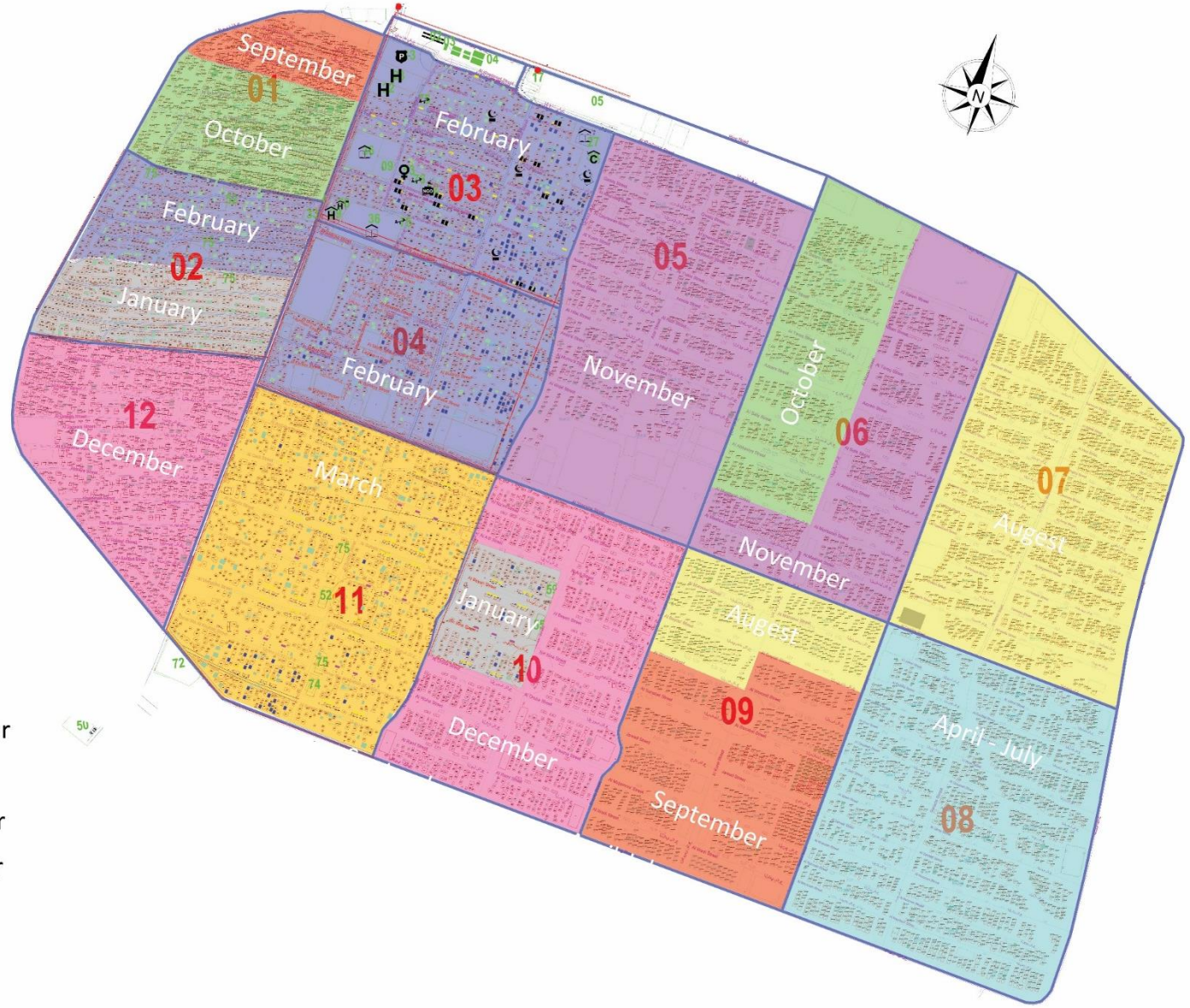
Cumulative Quantities Diagrams

TOTAL IN EACH DISTRICT
ZAATARI CAMP



TOTAL IN EACH DISTRICT
ZAATARI CAMP





Legend

Done in

- April-July
- Augest
- September
- October
- November
- December
- January
- February
- March

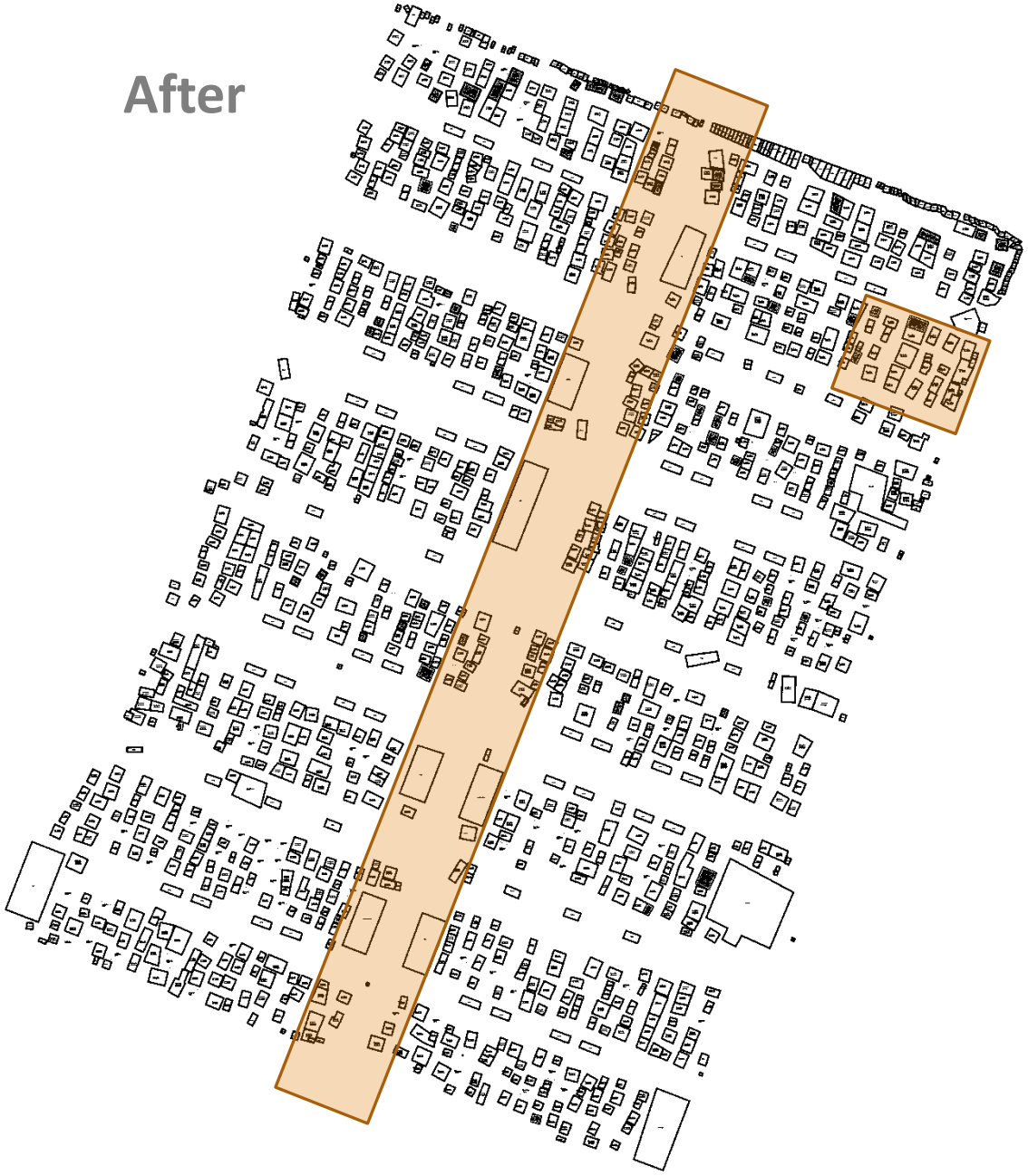
Restructuring Zaatari Camp Project Time progress – master plan from monthly report / till April 2016

2- Restructuring Project On-site

- **Accessibility for each Household**
- **Improved Households layout to have a healthy and safe environment for each family**
- **All HH have a reachable address for refugees and visitors**
- **All the main and secondary streets have a clear and visible name**
- **Proper arrangements of shelters and a ‘final’ layout plan of the camp to accommodate the Syrian refugees’ population growth.**

Before

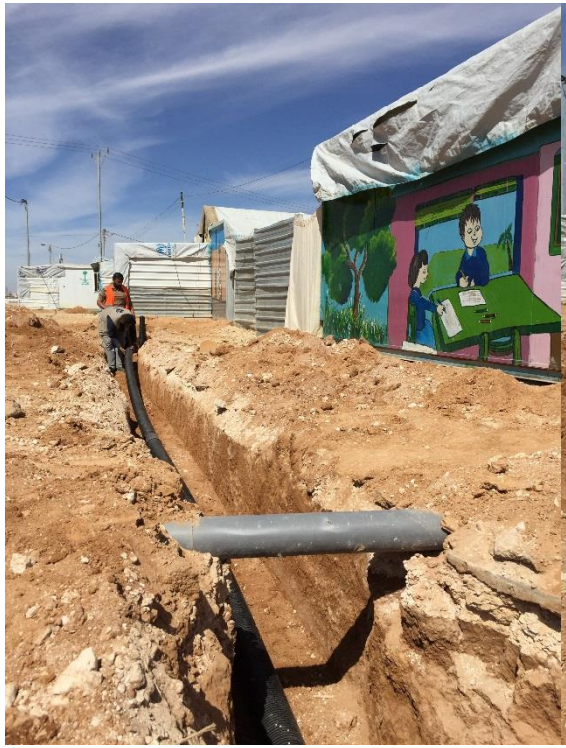
After

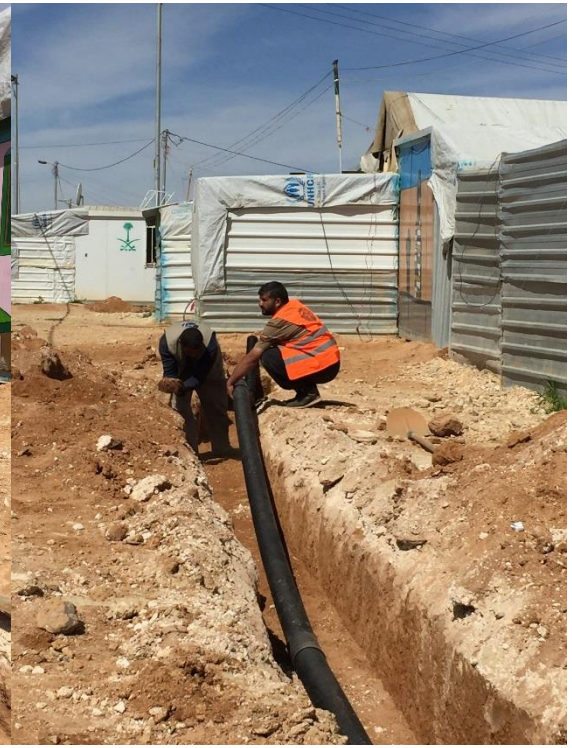


Before and after Restructuring Project - District 10

unicef
الصحن
الجميع

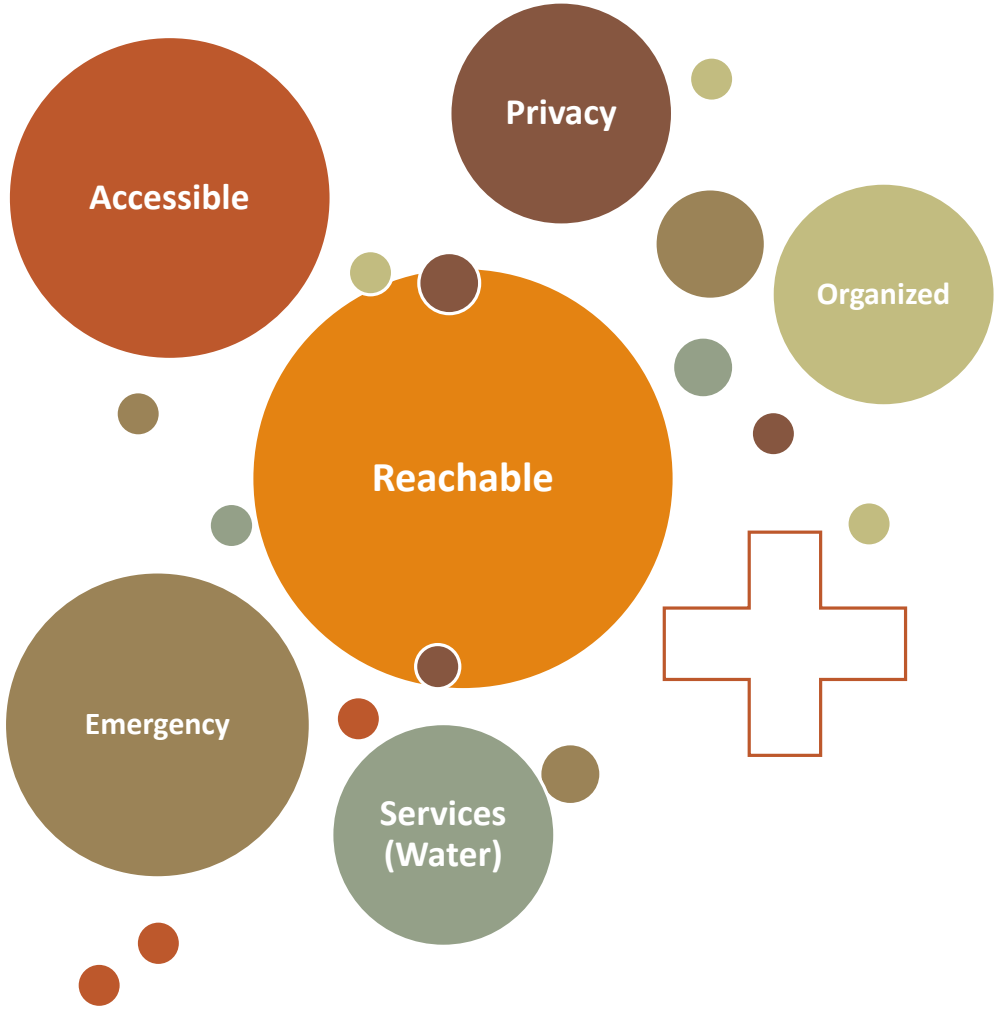
ACTED

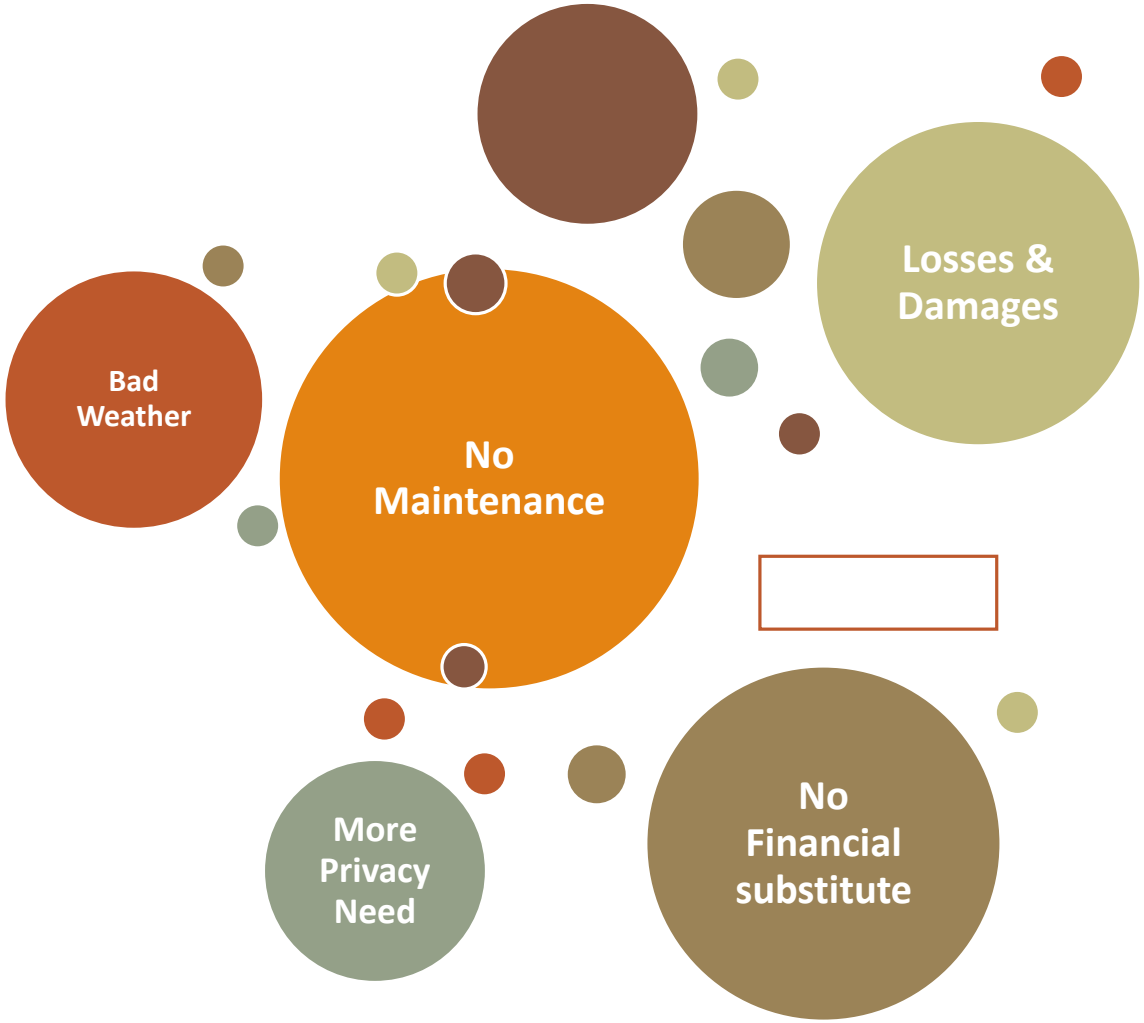




Beneficiaries’ Feedback & Project Evaluation

1. General Feed Back





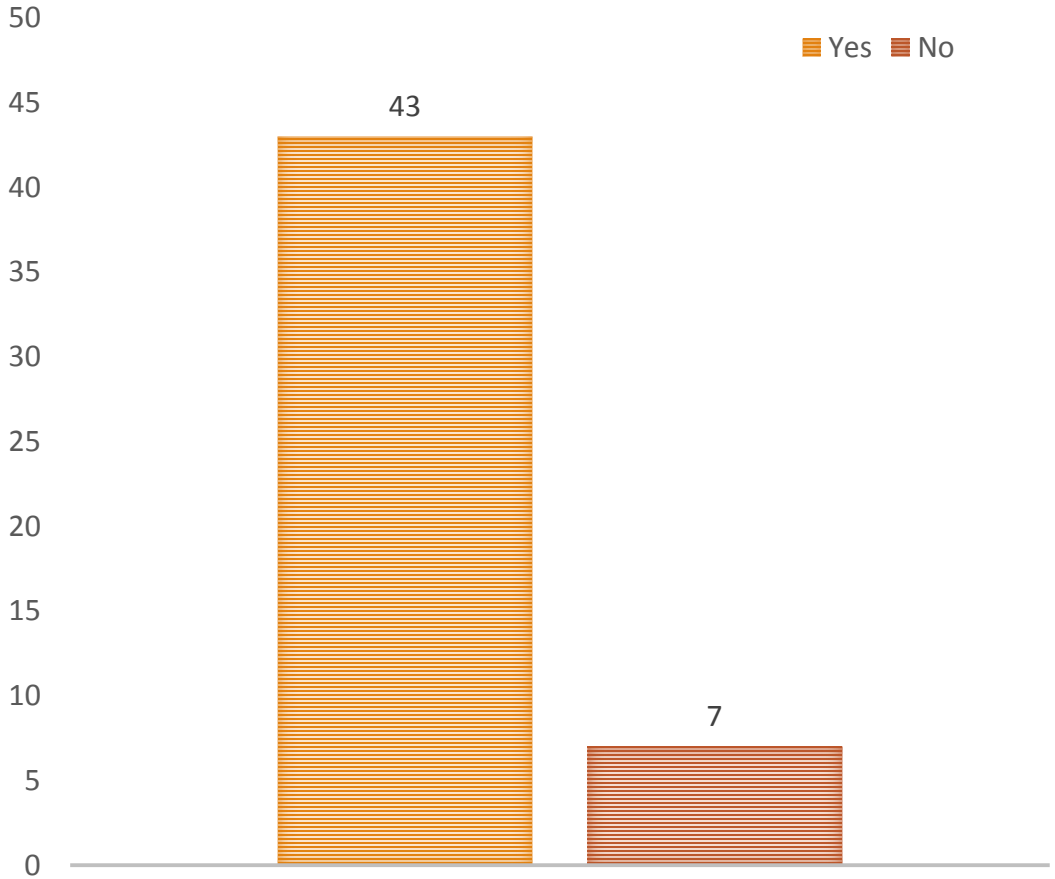
2. NRC Project Implementation Performance Evaluation

Pursuit NRC to providing a better service to the beneficiaries and in order to reflecting their opinions and their needs on our processes and to avoid falling in the same errors, CRT selected **50** random H.H and conducted **50** assessments to getting beneficiaries feedback about how was NRC team performance during the restructuring process in **District 08**.

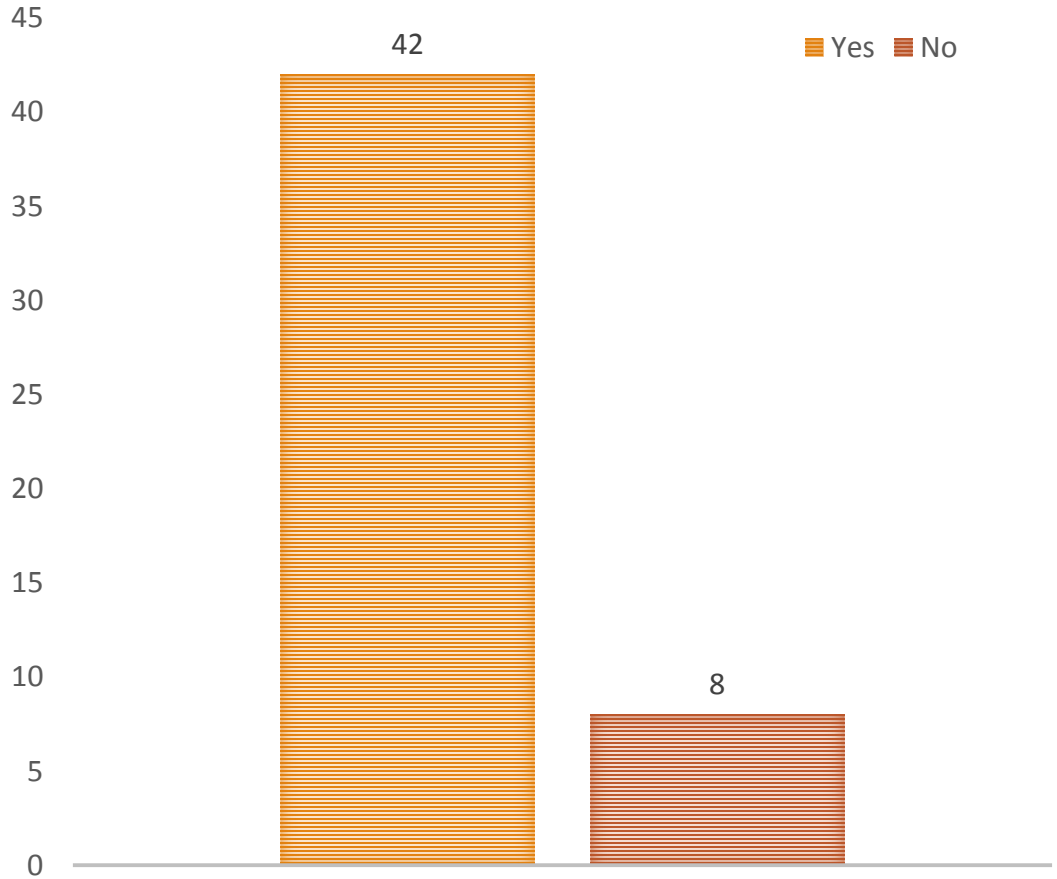
And in April 2016 NRC team selected another **50** random H.H and conducted **50** assessments to getting beneficiaries feedback about how was NRC team performance during the restructuring process in **District 10.**

Beneficiaries were asked four main questions as follows:

BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 08 / JULY 2015

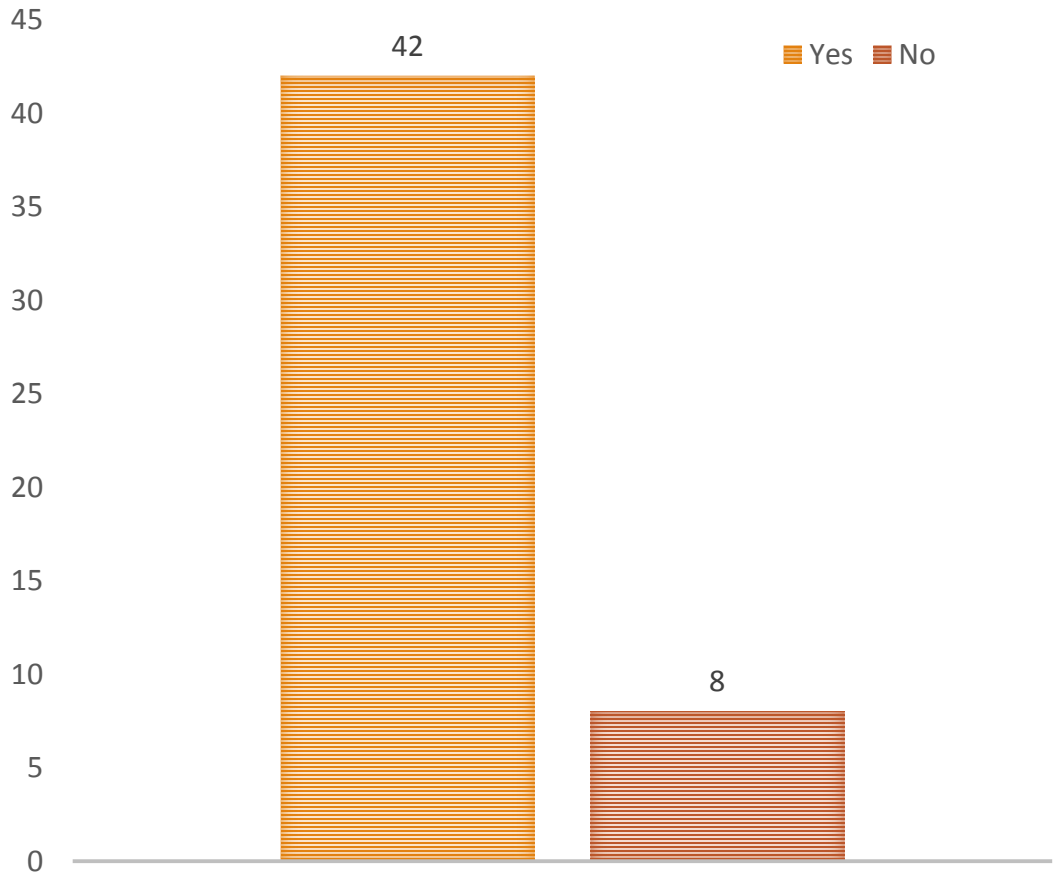


BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 10 / MAY 2016

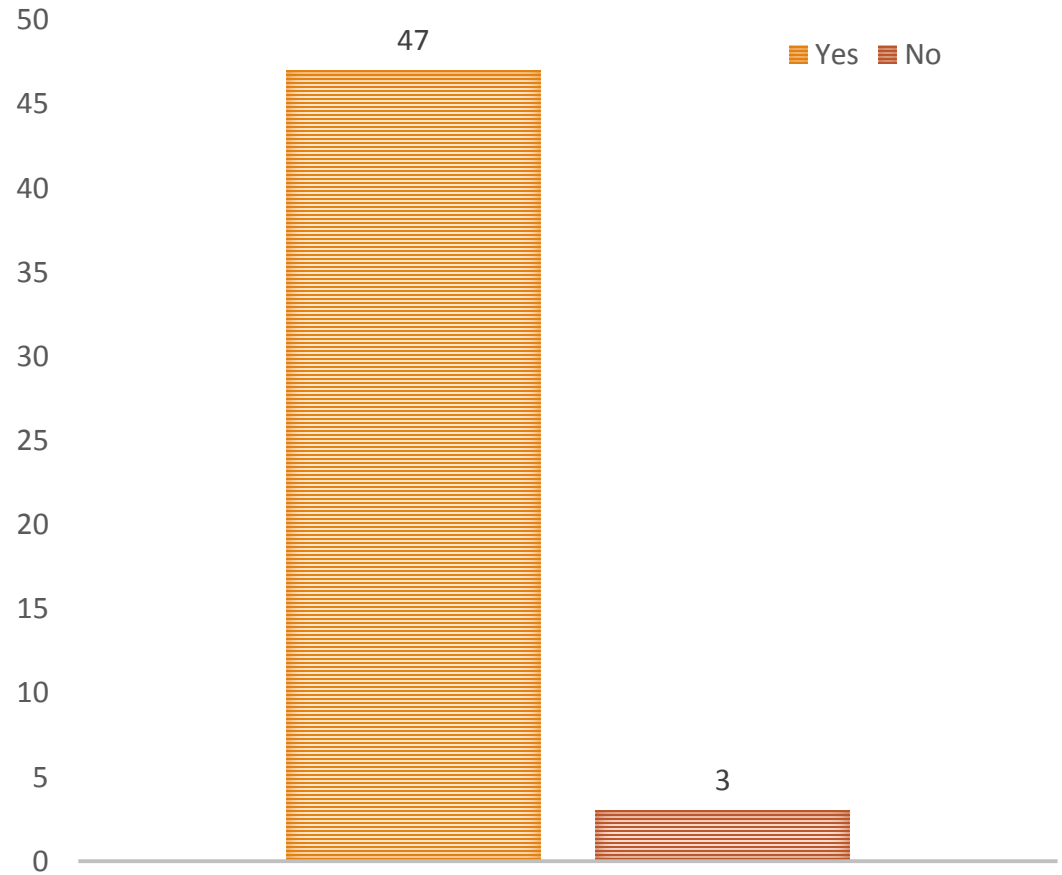


1. DO YOU CONSIDER PUTTING AN ADDRESS SIGNS ON YOUR CARAVAN USEFUL FOR YOU?

BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 08 / JULY 2015

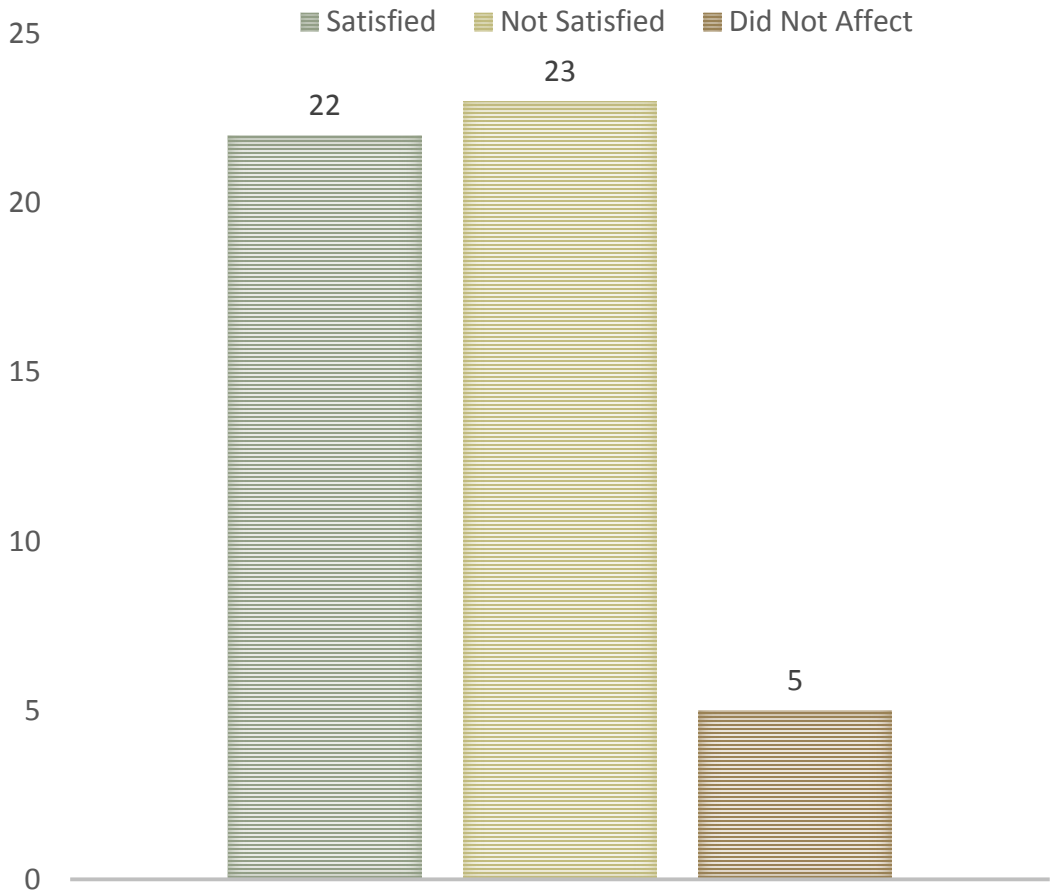


BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 10 / MAY 2016

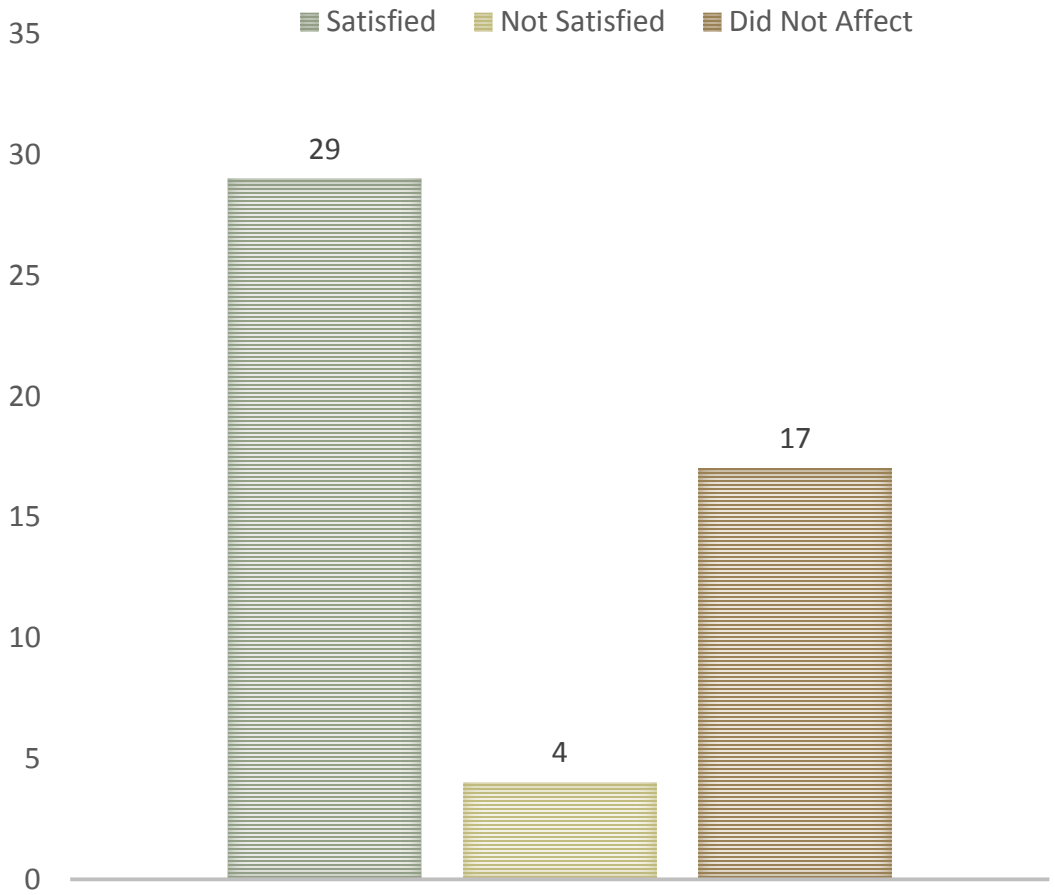


2. IN YOUR OPINION, DO YOU THINK THAT THE NRC TEAM HAS IMPROVED AND REORGANIZED THE STREETS IN YOUR DISTRICT?

BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 08 / JULY 2015

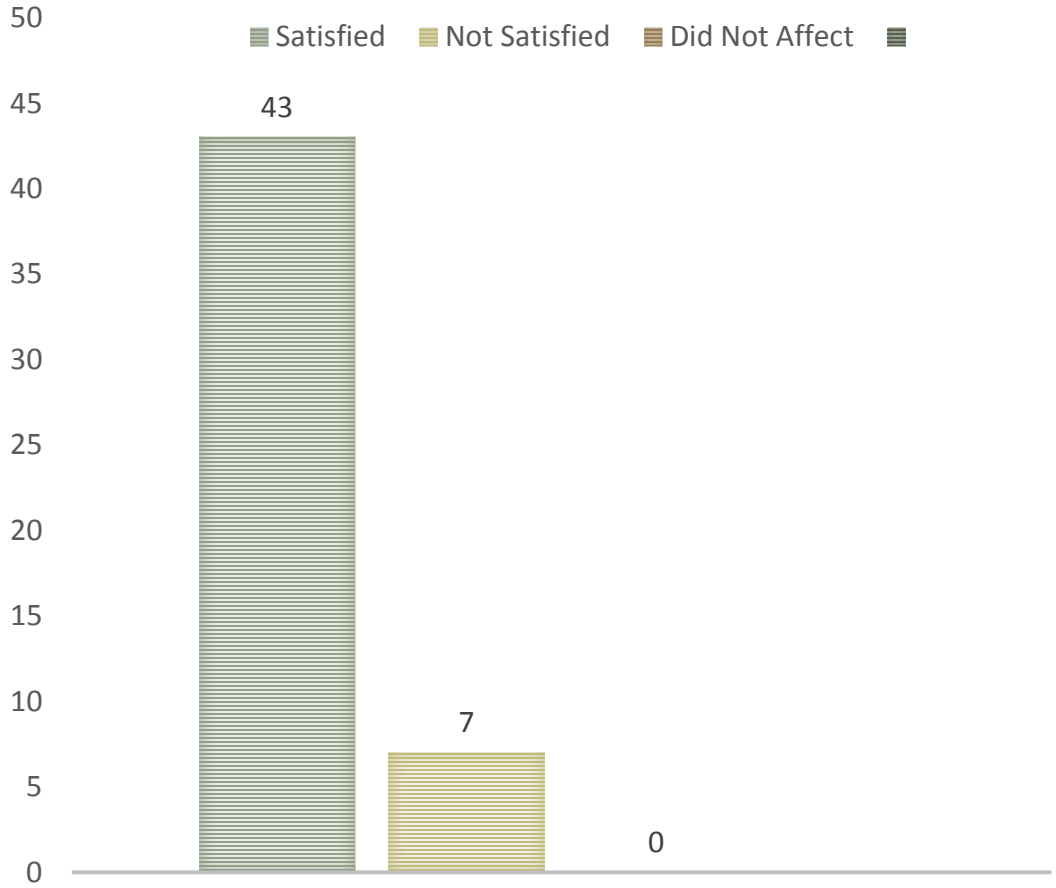


BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 10 / MAY 2016

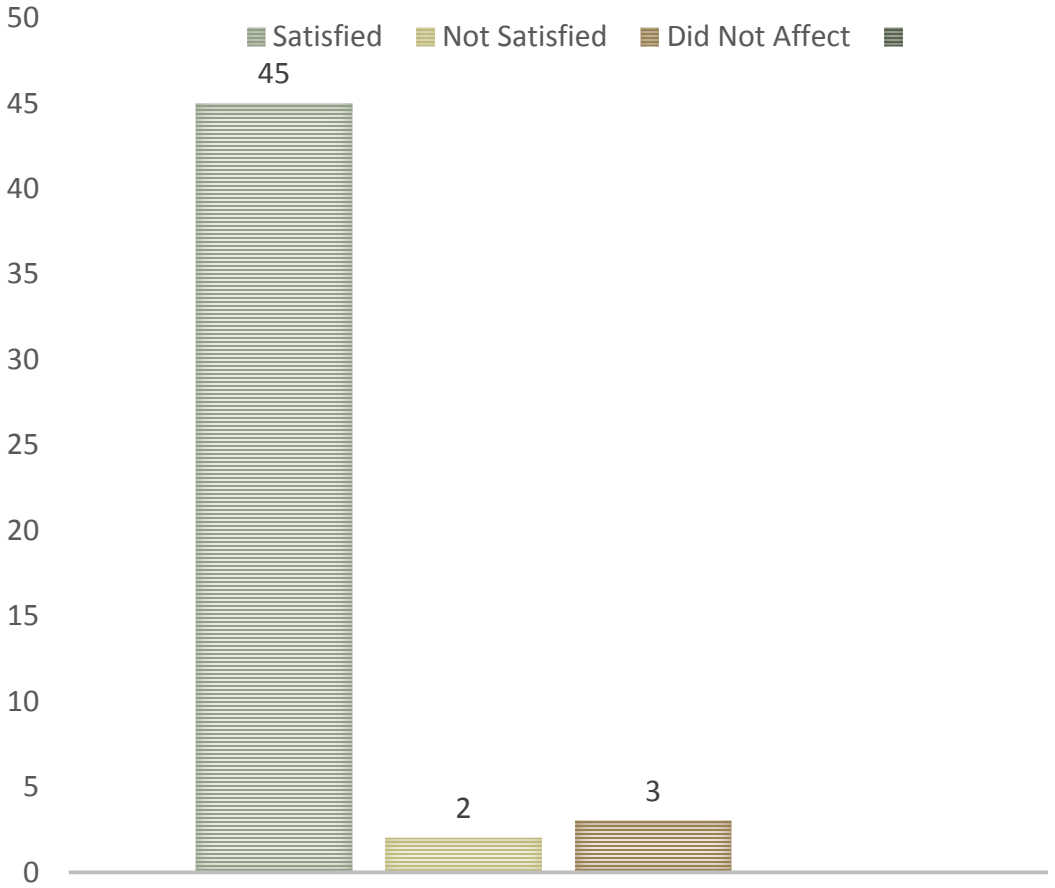


3. WERE YOU AFFECTED POSITIVELY OR NEGATIVELY FROM RELOCATING YOUR CARAVAN / TENT? PLEASE EXPLAIN?

BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 08 / JULY 2015

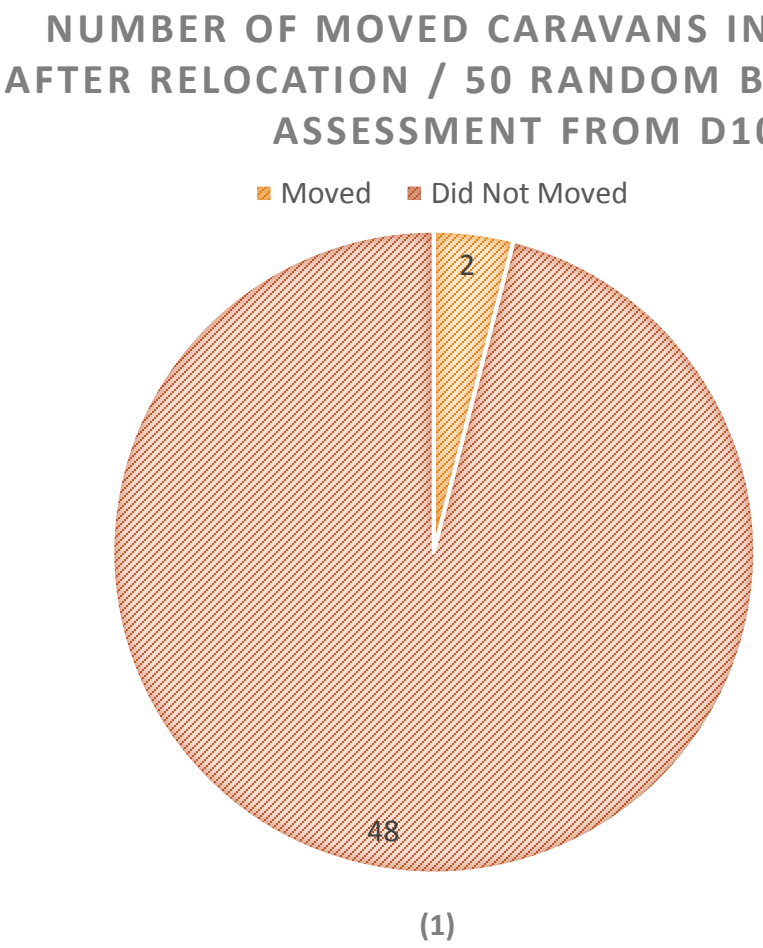


BENEFICIARIES FEED BACK DIAGRAMS – DISTRICT 10 / MAY 2016

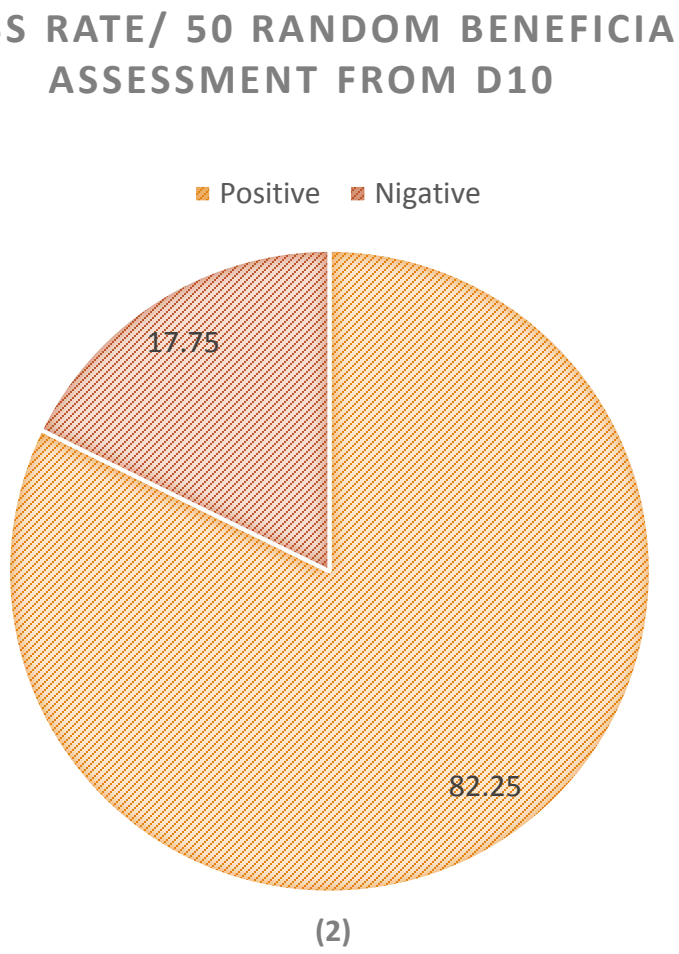


4. ARE YOU SATISFIED FROM THE PERFORMANCE OF NRC TEAM DURING RESTRUCTURING PROCESS IN YOUR DISTRICT? PLEASE EXPLAIN?

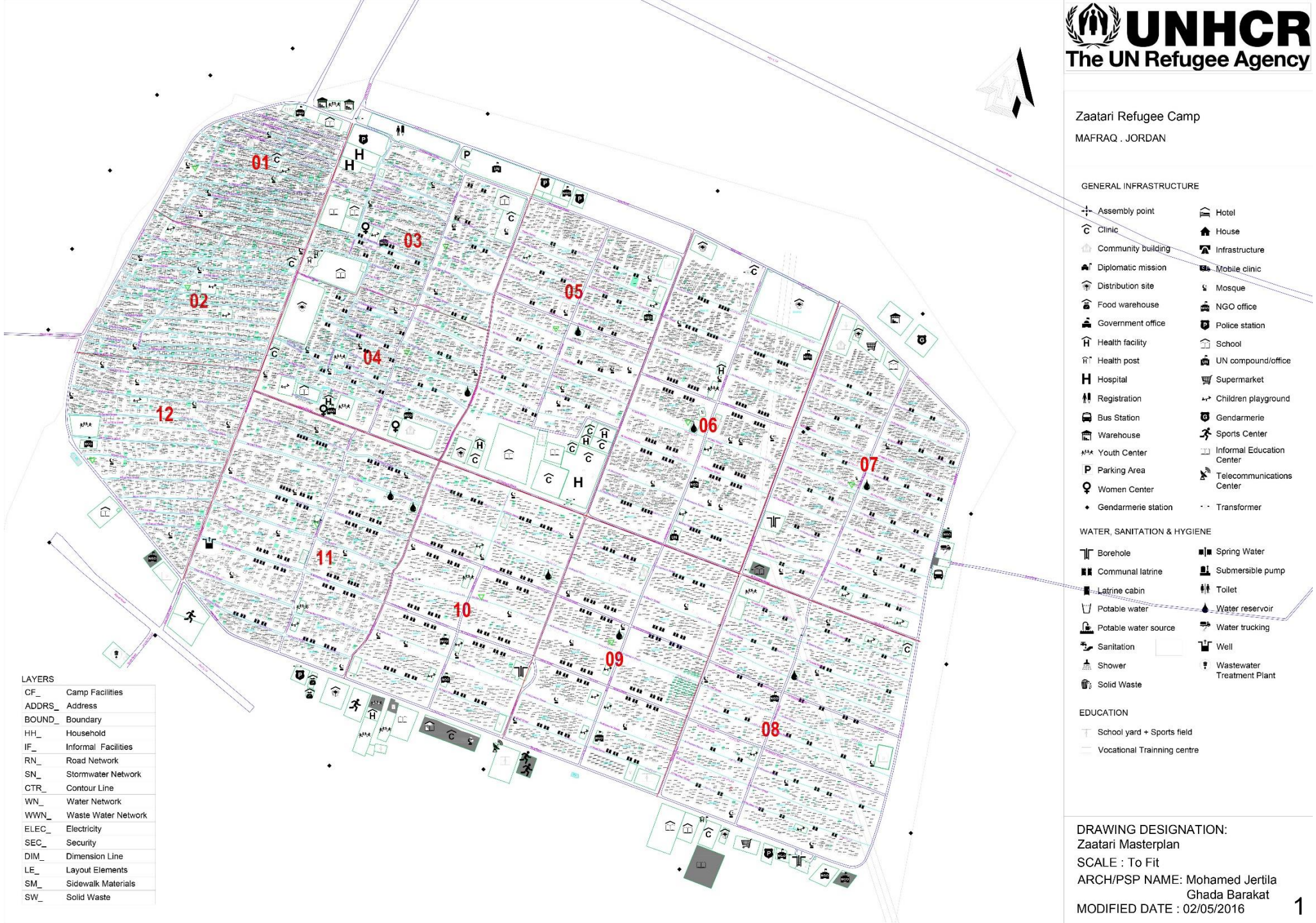
3. Project Evaluation & Monitoring



(1)



(2)



UNHCR
The UN Refugee Agency

Zaatari Refugee Camp

MAFRAQ . JORDAN

GENERAL INFRASTRUCTURE

- Assembly point
- Clinic
- Community building
- Diplomatic mission
- Distribution site
- Food warehouse
- Government office
- Health facility
- Health post
- Hospital
- Registration
- Bus Station
- Warehouse
- Youth Center
- Parking Area
- Women Center
- Gendarmerie station
- Hotel
- House
- Infrastructure
- Mobile clinic
- Mosque
- NGO office
- Police station
- School
- UN compound/office
- Supermarket
- Children playground
- Gendarmerie
- Sports Center
- Informal Education Center
- Telecommunications Center
- Transformer

WATER, SANITATION & HYGIENE

- Borehole
- Communal latrine
- Latrine cabin
- Potable water
- Potable water source
- Sanitation
- Shower
- Solid Waste
- Spring Water
- Submersible pump
- Toilet
- Water reservoir
- Water trucking
- Well
- Wastewater Treatment Plant

EDUCATION

- School yard + Sports field
- Vocational Trainning centre

LAYERS

CF_	Camp Facilities
ADDRS_	Address
BOUND_	Boundary
HH_	Household
IF_	Informal Facilities
RN_	Road Network
SN_	Stormwater Network
CTR_	Contour Line
WN_	Water Network
WWN_	Waste Water Network
ELEC_	Electricity
SEC_	Security
DIM_	Dimension Line
LE_	Layout Elements
SM_	Sidewalk Materials
SW_	Solid Waste

DRAWING DESIGNATION:
Zaatari Masterplan

SCALE : To Fit

ARCH/PSP NAME: Mohamed Jertila
Ghada Barakat

MODIFIED DATE : 02/05/2016

Conclusions

Number of HHs visited	14096
Number of relocated shelters	3275
Number of HHs upgraded with a new shelter	1450
Number of HHs that require a new shelter	837
Number of HHs assisted with an address number	14917
Number of occupied plots	12480
Number of unoccupied plots	1201
Number of vacant plots	1236
Number of streets within the ring road	152
Number of blocks in all districts	193

THANK YOU