Rethinking Refugee Camps Models
Planning for Temporality...Thinking Stability

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Scope of the problem

There is continuous increase in the number of people who are displaced by war and recently the number has reached a staggering new high as reported by the United Nations High Commissioner for Refugees (UNHCR).
Scope of the problem

Refugee’s camps are designed and built to provide refugees with **temporary** shelters and to secure their basic needs, and ensure their well-being. However, in many cases these shelters end lasting for a long time and in many cases are becoming the permanent residence for refugees.
Scope of the problem

As a result of the recent civil war in Syria, which started in 2011 and deflagrated within months, many families found themselves in war zones and were forced to flee their homes and seek safety elsewhere.

As of to date, among the 11.6 million people that were forced to leave their homes, there are 7.6 million who moved to different cities in Syria, and around 4 million people who are now refugees in other countries (UNHCR report).
Scope of the problem

WHERE ARE SYRIA’S 4M REFUGEES NOW?

NOT IN EUROPE!

The Civil War in Syria
2011 - Present

European Refugee Crisis
2015
**Scope of the problem**

**WHERE ARE SYRIA’S 4M REFUGEES NOW?**

- **95%** live in just 5 countries
  - Turkey: 1.62M+
  - Lebanon: 1.2M+
  - Syria: 235,000+
  - Jordan: 636,000+
  - Egypt: 140,000+

- **5%** live in the rest of the world

Total = 3.8M+ children, men and women

**THE CONFLICT IN SYRIA**

- 190,000 people killed
- 11.6M forced to flee their homes
- 7.6M sheltering within Syria
- 4M now refugees in other countries

Most of the refugee camps are located in developing countries.
Methodology

The main research method used to accomplish this thesis is the case study approach, using the specific case of Azraq and Zataari refugee camps in Jordan.

In addition, an interdisciplinary method is used as a secondary method to cover the important aspects that directly affect the design decisions of refugee camps. Such disciplines include; settlement patterns, environmental studies, humanitarian principles, urban sociology, and architectural theory.
Refugee Situation in Jordan

Registered Syrians in Jordan

Total Active Registered Syrians: 632,228
- Urban: 518,695 (82.0%)
- Camps: 113,533 (18.0%)

Age-Gender Breakdown
- Over 60: 1.5%
- 18-59: 21.0%
- 0-17: 26.8%
- Total: 95.3%

Biometric Statistics (IRIS)
- Prone to Fraud: 4%

Place of Origin
- Syrian: 581,330
- Lebanon: 2,005
- Other: 8,893

Specific Needs
- Child at risk: 48,925 (7.7%)
- Woman at risk: 7,246 (1.1%)
- Older person at risk: 5,136 (0.8%)

Arrivals
- Pre-2011: 9,875 (1.6%)
- 2011: 22,977 (3.6%)
- 2012: 129,340 (23.5%)

Registration Trend
- Registration: 2011: 2,850
- Renewal: 2011: 2,187

UNHCR Registered Syrians
- Jordan:
  - Amman: 176,929
  - Aqaba: 4,911
  - Other: 1,342

UNHCR Jordan: The UN Refugee Agency
Refugee Situation in Jordan
Refugee Situation in Jordan

ZATARI CAMP - 2012

AZRAQ CAMP - 2013

http://unhcr.org/

http://unhcr.org/
Refugee Situation in Jordan

ZATARI CAMP - 2012

AZRAQ CAMP - 2013
UNHCR Refugee camp design guidelines review

Disaster Relief - UNHCR GUIDELINES

The UNCHR prescribes a series of guidelines and minimum requirements that are to be achieved in disaster relief, including refugee camp planning. Useful documents can be obtained from UNHCR:

• UNHCR Handbook for Emergencies (2007)
  • Approx 600 page document
• UNHCR: A handy guide to UNHCR standards and indicators.
  • Quick reference

Tents at Domiz camp for Syrian Refugees in Dohuk – Nth Iraq

New camp for Syrian Refugees in Azraq city - Jordon
courtesy of Architects without frontiers Australia
UNHCR Refugee camp design guidelines review

UN Standards State: 45 sq.m per Household

- Water Storage
- External Household cooking area
- Sanitation
- Recreational facilities
- Storage
- Educational facilities
- Kitchen garden
- Administration
- Distribution area
- Market
- Firebreaks
- Roads and footpaths
UNHCR Refugee camp design guidelines review

1 TENT PER FAMILY
16 TENTS PER CAMP COMMUNITY
16 CAMP COMMUNITIES PER CAMP BLOCK

4 CAMP SECTOR EQUALS 1 "IDEAL" CAMP
20,000 PEOPLE

4 CAMP BLOCKS PER CAMP SECTOR

Courtesy of: beyondtherefugee.com
UNHCR Refugee camp design guidelines review

Challenging camp design guidelines

by Jim Kennedy

"Hierarchy of spaces"

"Design from the bottom up"

"planners must take a long-term perspective"

"Assuming that the 4.5sq.m per person interior shelter space stipulated in the UNHCR Handbook is adequate, then the necessary shelter space for a family of five would be 22.5 sq.m – but in reality this should be 31.5 sq.m if the family is to be able to expand to seven members over time. then only 11 families should occupy each block rather than suggested 16"

"While guidelines suggest annual population growth rate in refugee camps of 3–4% they fail to act on the consequences"
## Azraq Camp in Jordan

**HIGHLIGHTS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons of concern</td>
<td>28,016</td>
</tr>
<tr>
<td>Increase since Jan. ’15</td>
<td>151%</td>
</tr>
<tr>
<td>Children, including separated and unaccompanied minors</td>
<td>56%</td>
</tr>
<tr>
<td>People with disabilities</td>
<td>433</td>
</tr>
<tr>
<td>Of these are children</td>
<td>35%</td>
</tr>
<tr>
<td>Households headed by women</td>
<td>3 in 10</td>
</tr>
<tr>
<td>Women at risk</td>
<td>1,167</td>
</tr>
<tr>
<td>Shelters built since opening</td>
<td>10,023</td>
</tr>
</tbody>
</table>

### General Information

- **Date of opening:** April 30th, 2014
- **Capacity:** 50,000 people (exp. to 100,000)
- **Size of camp area:** 14.7 km²

### Geographical Snapshot

- **Distance to national borders:**
  - Syria: 90 km
  - Iraq: 255 km
  - Saudi Arabia: 75 km
Azraq Camp in Jordan
Azraq Camp in Jordan
Azraq Camp in Jordan
Azraq Camp in Jordan
THE DESIGN PROCESS

$6 \times 4 = 24 \text{m}^2$

$3 \times 1$

$24 \text{m}^2$

Arrangement of 6 shelter sharing 2 latrines and 2 showers

1 shelter
THE DESIGN PROCESS

- 28.0
  - Garden
  - Latrines
  - Shaded outdoor space
  - Courtyard

- 28.0

- 35.5
  - Kitchen

12 units makes 1 camp community
THE DESIGN PROCESS

1 camp community
THE DESIGN PROCESS

The Courtyard is a major element in the vernacular architecture of the Middle East.
THE TRADITIONAL ARAB HOUSE

The forms and spaces of the Arab house were dictated by the habits, traditions, and culture of its inhabitants. Although there were socio-cultural differences in each region, the architecture of the Arab houses retained a common architectural vocabulary, which expressed an outstanding response to both the CLIMATE of its specific region as well as the common CULTURAL needs.

The design solution that the Arab house introduced, relied on energy from the sun and wind plus the innovative architectural structures and forms that were developed to make use of this natural energy.

CHARACTERISTICS OF ARAB HOUSE

FIGURE 1: Courtyard of a traditional Arab house

FIGURE 2: A section through the courtyards and the sitting area

FIGURE 2: Wind catcher (Malqaf) - Plan and section of the malqaf

FIGURE 3: Mashrabiyyah (Wooden Lattice) - Details of the Lattice

THE DESIGN PROCESS
THE DESIGN PROCESS

living units

Pathways
THE DESIGN PROCESS

Open Spaces

Streets connecting blocks
THE DESIGN PROCESS

1 camp Block
THE DESIGN PROCESS

Program
3000 UNIT

240 UNIT per cluster / 13 Cluster

WFP  Main Market  Informal Market  Youth Space  Sports field  Clinic  Women Center  Child Space  PlayG.  Informal Learning  Community Center  School  Comm. Police
THE DESIGN PROCESS

Main Connection to Base Camp

Main Connection to Village IV

Main Connection to Village VI

Qibla

240X240 grid

1700m

1400m
THE DESIGN PROCESS

Camp Masterplan
THE DESIGN PROCESS

Recycling previous tents fabric using it to create a double skin roof
THE DESIGN PROCESS

Thank you