



Winterization Assessment & Recommendations

Syrian Refugees Camp , Al Za'atari, Al Mafraq, Jordan

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EXECUTIVE SUMMARY

The NRC Rapid Response Team (RRT) deployed to Jordan on the 11th September 2012 on an assessment mission with a brief to inform UNHCR on measures that can be taken to ensure refugee families living in Jordan's refugee camps are adequately protected from the winter climate.

The main focus of the assessment was the Syrian refugee population in camp Al Za'atari. The current camp figures are 30,000 persons mostly living in tents. The number of refugees expected to be living in camps is predicted increase to reach 150,000 persons by the end of 2012.

Three recommendations made were based on the current living situation of the refugees in the camps and their basic needs to cope with the coming winter season.

These recommendations are:

1. Distribution of winter clothing and blankets.
2. Adaptation of UNHCR tents with a fire resistant porch.
3. Supply of family heating and fuel.

An NFI package is proposed for each recommendation. The estimated cost of the intervention per family household, based on a preliminary market assessment, is divided as follows:

Package 1	Winter Clothes and Blankets	95 JD
Package 2	Construction Materials for the tent adaptation	70 JD
Package 3	Distribution of heaters and supply of fuel	165 JD
	TOTAL	230 JD

It is strongly recommended to commence the procurement of these packages as soon as possible. The winter season starts early December and the minimum time calculated for the tender process, materials supply and delivery is eight weeks.



1. Context

Al Za'atari camp which opened in July, 2012 is currently accommodating around 30,000 persons. Refugees continue to arrive on daily basis with figures sometimes reaching 1000 persons per day. The planned capacity of Al Za'atari camp is 80,000 persons. 95% of the refugees are living in tents supplied by UNHCR.

Donors, mainly from the Arab Gulf States, have pledged to supply prefabs to replace the existing tents before the winter time. Based on the current camp figures, there is a need for 6000 prefabs. This need is increasing by the day due to the continuous arrivals. The number of prefabs currently committed is 2800. This commitment accounts for less than 50% of Al Za'atari's current population and only a small fraction of the anticipated 150,000 camp based refugee population at the end of 2012. The replacement of the existing tents with prefabs to provide winter appropriate shelters is a recommended solution. However, unless the current capacity of prefabs production and transportation is doubled, it is highly unlikely that all the tents for the continually increasing camp population will be replaced before the next 4 months, in other words before the end of the winter season. (Refer to Annex 1)

With that in mind, this assessment aims to address the issue of winterization by providing optimum deliverable solutions to the majority camp population, i.e. refugees spending their winter in the current tents. The solutions proposed are an outcome of the analysis of:

- The climate pattern in al Mafraq directorate;
- A rapid site analysis of the services provided and the site drainage;
- The current situation of the refugees: their shelter conditions, their belongings and the NFIs they have received;
- Local and international market and suppliers.

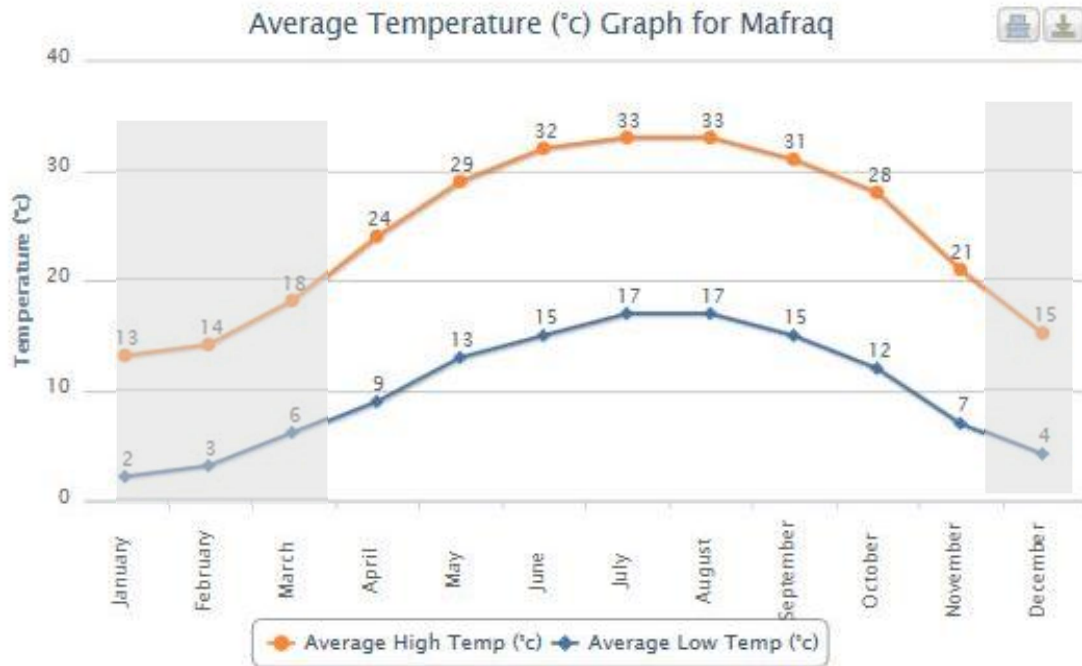
2. Climate Analysis

Al Za'atari camp is situated in al Mafraq directorate North of Jordan, in an area characterized by its arid climate, hot summers, cold winters and minimum rain falls.

2.1 Average temperature

The coldest period of the year is between mid-November and mid-March with a lowest average temperature of 2°C.

Addressing the low temperature levels during the winter season is the highest in terms of priorities of the winterization response.



Source: Worldweatheronline

2.2 Rain fall

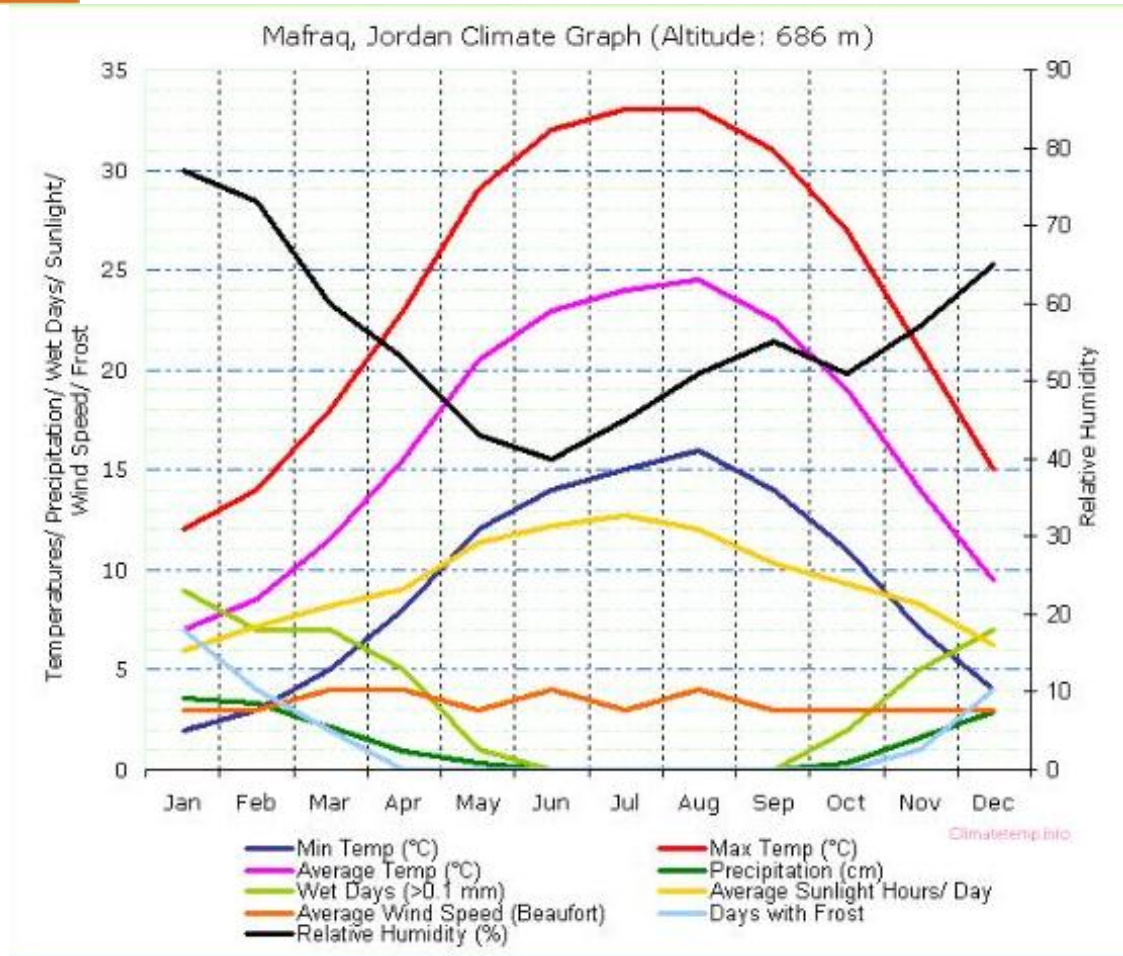
The average rainfall in Mafrq during the winter season is 45mm one of the lowest in Jordan. December through February receives an average of 10 rainfall days a month.

Based on the topographical data obtained and the levels of precipitation, the drainage of the camp does not pose a critical flood risk. The natural slope of the site goes from N-E to S-W. (Refer to Annex 2). An open rain water drainage network is highly recommended to mitigate any potential flood risks due to both the gravelling of the site and to structures blocking the natural surface water drains.

2.3 Wind Speed:

The two strongest wind patterns that affect Jordan are the South East Khamaseen which is characterized by dust storms and occurs for 50 days between March and May. The second is the North East Shamal wind that lasts for few days' periods between June and September. Overall the average wind speed is consistent throughout the rest of the months. The winter season in general is not affected by strong wind patterns.

Regular messages to the tent occupants to maintain the tent structure by tightening the tent guy ropes and securing the tent pegs is recommended.

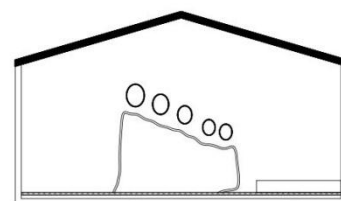


Source: Climatetemp.info

3. Winterization Strategy:

The key shelter priorities are:

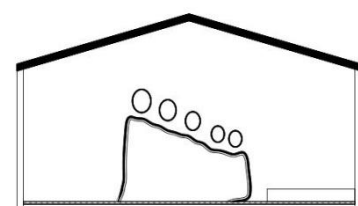
- Keeping the immediate space around bodies warm to maintain body core temperature
- Protection from the elements
- Heating raise reduced body core temperature



3.1 Keeping the immediate space around bodies warm

The standard NFIs kit already distributed to the families includes blankets, and mattresses. This kit will need to be supplemented by additional items to compensate for the low heat insulation capacity of the all-weather tent which the refugees are currently living in.

Most of the families currently in the camp arrived with few belongings and there has been no formal distribution of clothes in the camp. It was apparent through interviews with the refugee families, and observation of the personal belongings in the tents, that winter clothes are a significant need. This need may be addressed through:



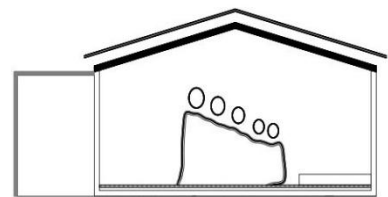
Distribution of Winterized NFI Packages

Distribution of packages of warm clothing and supplementary thick top cover blankets are required to provide personal insulation.

The recommended packages (refer to Annex 3) come in two sizes: a family package tailored for 5 persons and a single male adult package.

3.2 Protection from the elements

One of the biggest current shelter challenges in Za'atari camp is the scavenging of empty tents for poles to construct porches in front of the occupied tents for privacy reasons. Tent scavenging is very likely to increase during the cold season where people will seek to use extra layers of material to provide warmth and protection from the elements. In addition, the refugees are already using improvised open fire stoves outside their tents to make hot drinks. The likelihood of similar solutions to be adapted for heating inside the tents is very high. Further protection from the elements can be addressed by:



Provision of Shelter Material Kits

This will help contribute to the protection from the elements*, mitigate the risk of fire and smoke in the tents and reduce the scavenging of expensive tents. The recommended package (refer to Annex 4) will primarily address the following

- Addition of a water proof layer on the tent roof.
- Formalizing the construction of fire mitigated porches.

Depending on material availability in stocks, this package can be supplemented by items from UNHCR family tent winterization package (refer to Annex 5)

**The standard NFI package includes sleeping mats and mattresses that provide ground insulation and prevent excessive heat loss to the ground.*

3.3 Heating

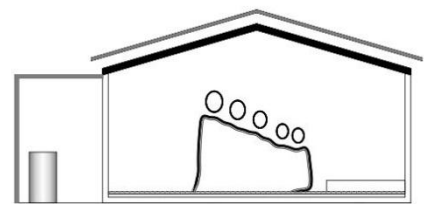
There are two options of providing warm heated spaces to the refugee population:

Option 1: Heating of Communal Spaces

In theory, this is the most feasible option for the donors in terms of cost. It provides controlled heating environments and reduces the risks of fire and fumes in tents. Up till now there are no

weather tight communal structures constructed in Za'atari camp. The minimum area required per person for communal structure is 0,6m². The current official number of the refugees in the camp is 30,000 persons. Assuming that 5,000 of the total current population is provided by heating during school hours, the communal space required to cater for the remaining 25,000 persons is: 15,000 m². If we have 5 shifts per day, the area needed will be 3,000 m² or 30 x 100m² structures. Unfortunately, this option is not realistic in this context. The cold season will start in 10 weeks, and the possibility of these structures to be completed before then is minimal. Even if these centres are ready by then, the utilization of these spaces by the female population of the camp is in question. Women with children are busy during the day with household activities and are very unlikely to go to these centres to seek warmth during the night.

At the moment the only communal spaces that may realistically be heated are the child friendly spaces and schools. This is a good start as it provides warmth to more than 15% of the population of the camp. The capacity of the current school proposed by UNICEF for camp based education is 5,000 pupils divided on two shifts. The total number of schools planned as the camps expand is four to accommodate up to 20,000 students.



Option 2: The risk of people resorting to open fire as a source of heating is very high and had been witnessed extensively. Controlling this risk by prevention is not realistic. Any source of heating inside the tent comes with the risk of fire and suffocation due to fumes. This risk can be dramatically reduced by:

- Provision of an appropriate well ventilated space for the heater in front of the tent.
- Supplying a heat source with fire safety features. The type of heater will also be dependent on the type of fuel, its source, availability and cost.
- **ANY TENT HEATING OPTION MUST BE ACCOMPANIED WITH FIRE RISK AWARENESS CAMPAIGNS AT ALL LEVELS TARGETING THE INDIVIDUAL FAMILY HOUSEHOLD, WOMEN'S GROUPS, MEN'S GROUPS AND SCHOOL CHILDREN.**

Distribution of a Heating Package

The recommended package (Annex 6) will include:

1. A heater with safety features. All distributed heaters should have the same specifications to avoid inequity between the refugees.
2. Hot water bottles, to allow heat transfer to the inside of the tent.



4 Project Logistics

4.1 Procurement: (refer to Annex 7) for customs procedure analysis

4.1.1 Market Analysis

The Jordanian market is very rich with all kind of commodities with high quality standards. National Quality Control Departments do not permit low quality items to enter the country. The country is also considered as a transit free zone to other countries in Africa and some Arab countries. However, high tax rates and a small consumer market results in prices that are not always competitive with big foreign suppliers.

The assessment team have compared the prices, stock availability, quality and delivery times with suppliers operating in Jordanian, Turkish, Indian, Pakistani and Chinese markets. (See Annex 6) Getting quotes takes time in some cases and most of local suppliers have to be called to clarify, quantify and specify their offers.

Construction materials suppliers and textile manufacturers are sufficient in country, though their prices may be a little higher than foreign imported equivalents. As for stoves the local market does not have stocks of 30 000 stoves which is needed for an estimated 150 000 refugees and they have to be imported. The desired model (contained flame diesel stoves which beneficiaries are used to) are only produced in Syria in relatively small capacity which could not satisfy the need and the time frame, while potential suppliers in China and India referred us to the Syrian market for this model. An alternative model: a kerosene heater conforming with newly revised Jordanian safety standards and equipped with security switch off mechanism is recommended. The recommended option would be to split the order between several suppliers providing they will not be sourcing the model from same manufacturer.

4.1.2 Tender

The biggest challenge with tender process would be the timeframe and the approaching winter. The tender process takes a minimum of two. This time includes announcement of the invitation to tender in the newspapers, the minimum time suppliers need to source their goods and the time of opening the bids after the deadline of submissions.

A faster way is by inviting preselected suppliers for a limited open tender.

Many suppliers highlighted that they need between 15-25 days for production of goods. The duration of delivery by sea depends on the source of supply and can take between 3-6 weeks .

Delivery of goods from Aqaba port and start of distribution can be done in one week.

If we want to distribute the desired goods during the period of 1st – 15th December, procurement process needs to start next week or we might miss the cold season.

4.2 Storage

4.2.1 Government Storage

The Government Warehouses are some of the best in the county and generally, well built, well ventilated and easy to access with strong security presence.



There are excellent storage facilities at Aqaba port and also at the Logistics Village in Aqaba which is used as a bond area for imports. There is a free zone in Zarqa and numerous warehouses in Amman which can be used to receive goods before dispatch for distribution.

Recommended Amman storage needs are 1 000 m² for 2-3 months, Zaatar camp (storage must be in separate fenced compound within the camp) Rubb-halls and additional 700 m² for storage of building materials and trucks manipulation

4.2.2 Commercial Storage

Many private companies provide safe and secure stores for all storage needs. Most of them are concrete stores and some are steel stores with strong foundations.

Private storage facilities are mainly around Amman, Zarqa and Aqaba cities with a few in other main cities. All private sectors storage facilities provide 24hours/days access.

6. Implementation

6.1 Distribution

Once supplies arrive, the distributions have to be organized for 1 000-2 000 families per day and finish by the end of December. A suggestion would be to do it with preregistered number of people (families which are due for distribution will get a tokens day before) in order to maintain order. Token should be given in a different point from the distribution site.

Planning of transport services will be done accordingly to distribution plans and refugees locations. Toyota Dyna size truck can be based in the camp to serve distribution. Distribution of Winterized NFIs should be undertaken separately from the distribution of the regular NFIs that the refugees receive on arrival.

Moreover, each of the 3 Winterization Packages should be distributed separately, given the different nature and use of the items. The heating packages should only be distributed to families who have completed the porches in front of their tents according to the proposed design.

Beneficiaries out of the camp could be served according to their location and topography of terrain unless coupons are used with preselected vendors.

6.2 Information Dissemination

6.2.1 Sensitization of the Refugees

During the assessment visit to the Za'atari Camp it became obvious that the expectations of the refugees in regards to the winterization are high with families anticipating the receipt of prefabs before the winter season. In order to alleviate the possibility of unrest in the camp, an early information campaign explaining to the refugees what to expect this winter is **of utmost importance.**

6.2.2 Fire and Fumes Risk Awareness

The importance of awareness of the fire risk cannot be emphasised enough. This has to address the usage of the communal kitchen, heating of tents and using open fires in communal spaces.



7. Monitoring

Distribution of heaters will be conditional on the beneficiaries constructing an extension porch in front of their tents. Monitoring has to be an integral part of any construction material distribution, to check on the proper utilisation of the shelter winterization package. The monitors' role should also be to provide an explanation to the refugees on how to construct the porch.

It is highly recommended that a sample of the porch be constructed in each block for the refugees to use as a reference for their own construction. Community mobilisation efforts and a small allowance for additional paid construction labour may be used to ensure porches are constructed for families without self-build capacity.



ANNEX 1 Prefabs

This information is based on a recent visit to one of the manufacturing companies in Amman who has a production order of 2500 prefabs for Al Za'atari camp. This order is funded by the Saudi government.

Observations made:

Apart from minor modifications, the structure, design, materials used and quality of execution of these prefabs is **satisfactory**.

The modifications required are:

- Shortening the height of the legs of the prefabs from 30cm to 10 cm to reduce the gap from the ground and improve accessibility.
- The area of the steel plate at the bottom of the legs of the prefab to be adjusted to 20x20cm and the thickness to 6mm
- Installation of one step at the entrance to improve access and cover the angle positioned at the door. (the angle is one of four used to carry the prefab). The proposed step's dimensions are: riser 16cm, tread 30cm and width of step minimum 60cm.

The current production rate of this factory is 60 prefabs per day. The average delivery rate to the site is 40 prefabs per day. On average 100 prefabs require: 1.5 days production time and 2.5 days delivery time.

Accordingly, given there are no disruptions in the manufacturing or delivery, 2500 prefabs will require 37.5 days to produce and 62.5 days to deliver, in other words if delivery to the site starts on the first of October, all these prefabs will be on site by early December.

Any more orders from the same supplier to meet the winter deadline for all the refugee families is not possible without doubling the production and delivery capacity. This is an unrealistic assumption as it will require up- scaling of the current factory's infrastructure which requires time and major investment.

Commissioning the additional prefabs to other factories, which are able to produce units of similar standards to the factory above, will be dependent on the production and delivery capacity of these factories as well.

Regardless of the outcome of the above scenarios, providing winterized NFI kits and heaters to the refugee families is still required to provide reasonable warmth comfort inside and outside the shelter/prefab.

Distribution of winterized shelter packages to bridge the gap for the families who will be living in tents whether they are new arrivals or waiting for the receipt for their allocated prefabs.

Al Za'atari camp slopes is from North East to South West. The difference between the height point at NE of camp and lowest point at SW is approximately 14m.



A sample of a shelter layout block at Za'atari Camp

- Tertiary Drainage to connect drainage around tents to Secondary Drainage System**
- Secondary Drains Along the roads between Tent Communities**
- Primary Drain Connecting to the major Storm water network (where existing) or outflow onto non occupied land.**

The cross section of the drainage need to take into consideration the precipitation pattern in al Mafraq area.

The proposed drains are open drains. Depending on the timeframe, the drains can be constructed in two phases:

- Phase 1: unlined drain network.
- Phase 2: Lining of the drains cement.

The outlet(s) of the primary drain if it is not connecting to a major storm water network has to be carefully planned to avoid flooding areas adjacent to the camp.



ANNEX 3

Package I: Winterized NFI

This package is for a family of 5, based on an average family composition of a father, a mother and 3 children. The prices are based on average market costs.

Package I (a) for a family of 5 persons (Cost app. 95 JD)

#	Item	Size	Qty	Unit	Unit Cost	Total
1	Women's Shawl	N/A	1	pc	2,8	2,8
2	Women's Legging	L & M	2	pc	7	14,0
3	Socks	Adults	6	pairs	1	6,0
4	Socks	Children	4	pairs	0,5	2,0
5	Women Fleece Jacket	L & M	2	pc	6	12,0
6	Men Fleece Jacket	XL	1	pc	6	6,0
7	Children	2, 6, 9	2	pc	4,35	8,7
8	Woolen Hat Men	N/A	2	pc	1,5	3,0
9	Woolen Hat Kids	N/A	2	pc	1	2,0
10	Blankets	Double	2	pc	9,5	19,0
	Total Cost of Items					75,5
	Transportation, loading, unloading cost (10% material cost)					7,6
	15% contingency					11,3
	TOTAL COST					94,4

Package I (b) for a single male (cost app.24 JD)

#	Item	Size	Qty	Unit	Unit Cost	Total
1	Socks	Adults	2	pairs	1	2,0
2	Men Fleece Jacket	XL	1	pc	6	6,0
3	Woolen Hat Men	N/A	1	pc	1,5	1,5
4	Blankets	Single	1	pc	9,5	9,5
	Total Cost of Items					19,0
	Transportation, loading, unloading cost (10% material cost)					1,9
	15% contingency					2,9
	TOTAL COST					23,8



Specifications (refer to Annex 8 for Suppliers)

Fleece Jackets

material	100% polyester fleece
weight	min 230 GSM
design	Long sleeves, to be opened in front with a Plastic Zip & Nickel slider , with two pockets in the lower part Knitted rib in jacket bottom Belt (waist), neck and Cuff
sizes	as per customer request (Adult & children)
packing	20 pieces in carton box, weight 16 kg 16 500 units packed in 1 x 40" container daily production 1200 pieces boat travel time 25-30 days

Winter Hat

material	40% acrylic 60% polyester
weight	55 GSM
design	plain fabric
sizes	17 x 27 cm
packing	300 pieces per carton box, weight 16 kg 143 500 pieces per 40" container daily production 2000 pieces boat travel time 28 days

Acrylic Mink Blankets

materyal	acrylic mink
weight	2,4 kg
sizes	180 x 200 cm hemmed edges loading capacity 5,500 pieces per 40" container start deliveries in 45 days & deliver 4 containers weekly

Women Shawl

Local product	can choose when ordering
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Women leggings

Local product	can choose when ordering
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Socks

Local product	can choose when ordering
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ANNEX 4

Package II: Winterized Shelter Extension

Cost approximately 70 USD per extension, excluding plastic sheeting.

A pick axe to be provided for each 10 tents to dig the poles foundations and use for digging drainage around the tents. The materials supplied are to construct a 2x 2.5 m porch for privacy and to provide a safer heated space. One of the plastic sheets to be used to cover the roof of the tent to provide longer term water proofing.

#	Item	Qty	Unit	Cost (JD)	Total Cost
1	(4"x2") x 2.5m pine timber	4	pcs	3.2	12.8
2	(2"x2") x 2m pine timber	4	pcs	1.25	5
3	(2"x2") x 2.5m pine timber	2	pcs	1.6	3.2
4	2m GI corrugated Sheet (thickness 3/10")	2	pcs	5.2	10.4
5	2.5m GI corrugated Sheet (3/10" thickness)	2	pc	6,5	13
6	4x5 m triple weave plastic sheet (UNHCR Standards)	2	pc	In kind	0
7	1.5" Cap nails	80	pcs		2
8	3" nails	24	pc		2
9	20m x 4mm plastic rope	2	pc	0.2	0.4
10	2mm tying wire	0.5	Kg	1.5	1.5
11	Hammer	1	pc	5	5
	Total material cost				55,3
	Transportation, loading, unloading cost (10% material cost)				5.53
	15% contingency				8,295
	App. TOTAL COST				69,125

Timber

2"x2" sawn dry pine wood

2"x4" sawn dry pine wood

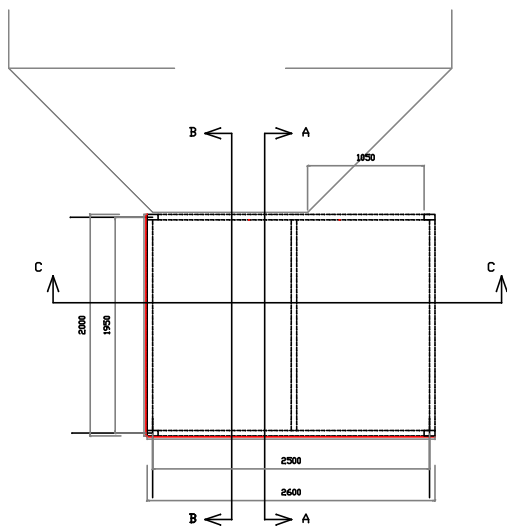
Length as specified in BOQ

GI Corrugated Sheets

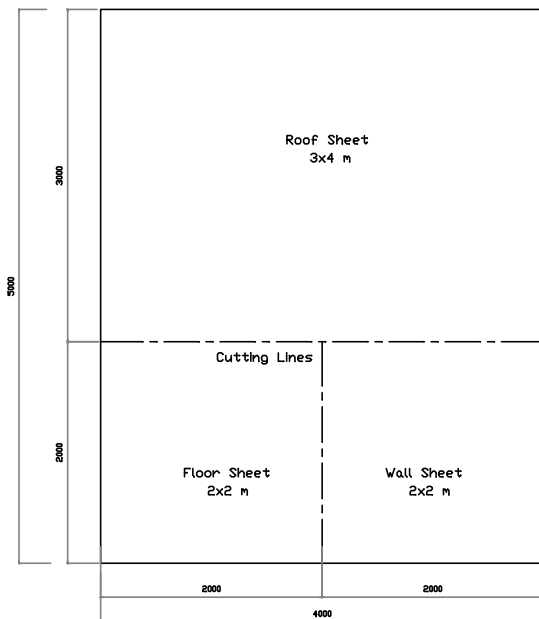
Width 108 cm

Length as specified in BoQ

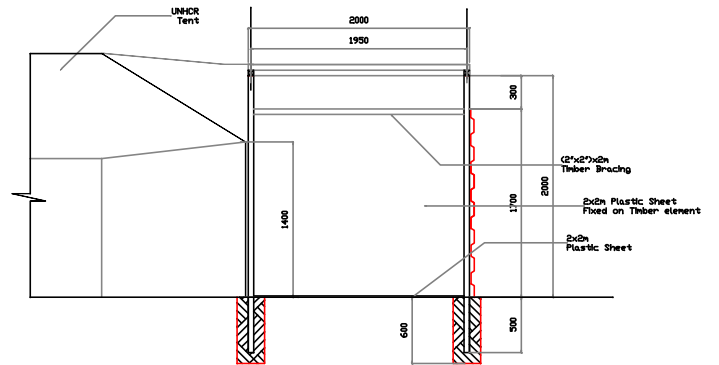
Thickness: 0.16mm



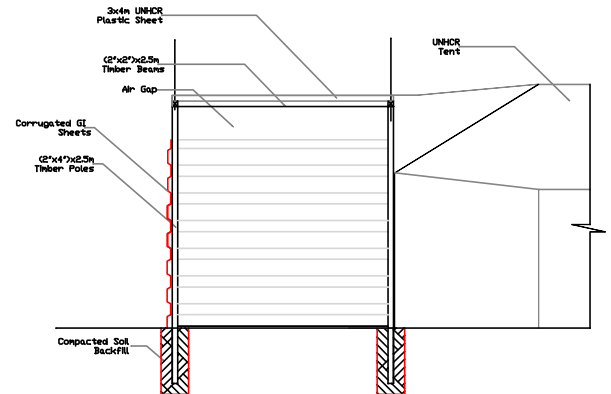
Plan



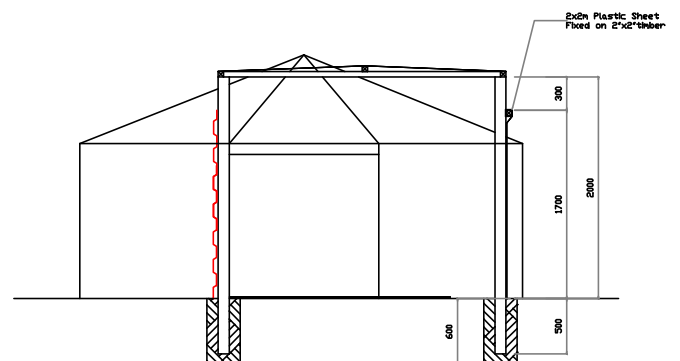
UNHCR 4x5m Plastic Sheet
Cutting Plan



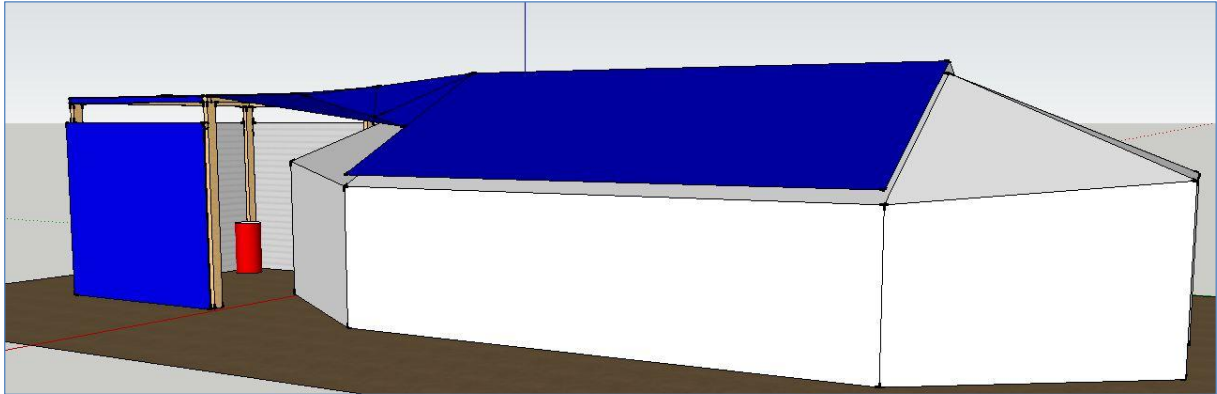
Section AA



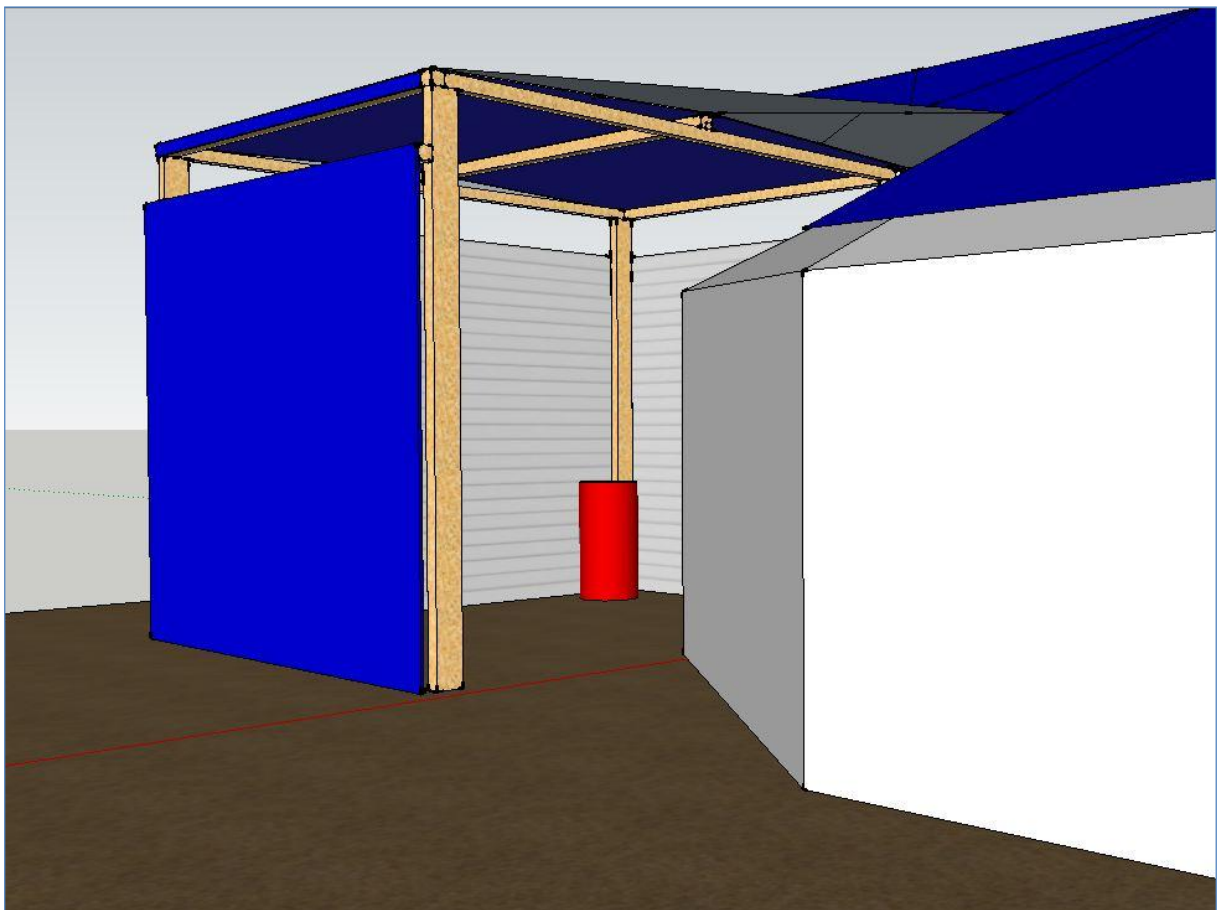
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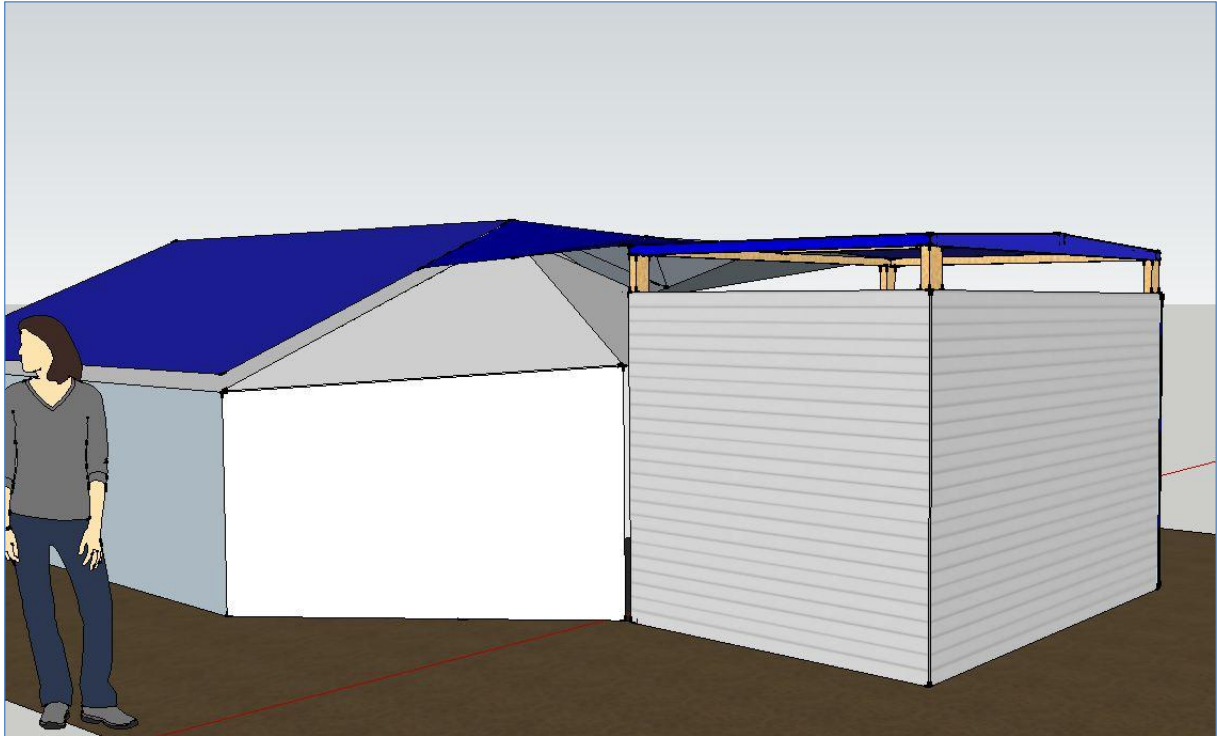
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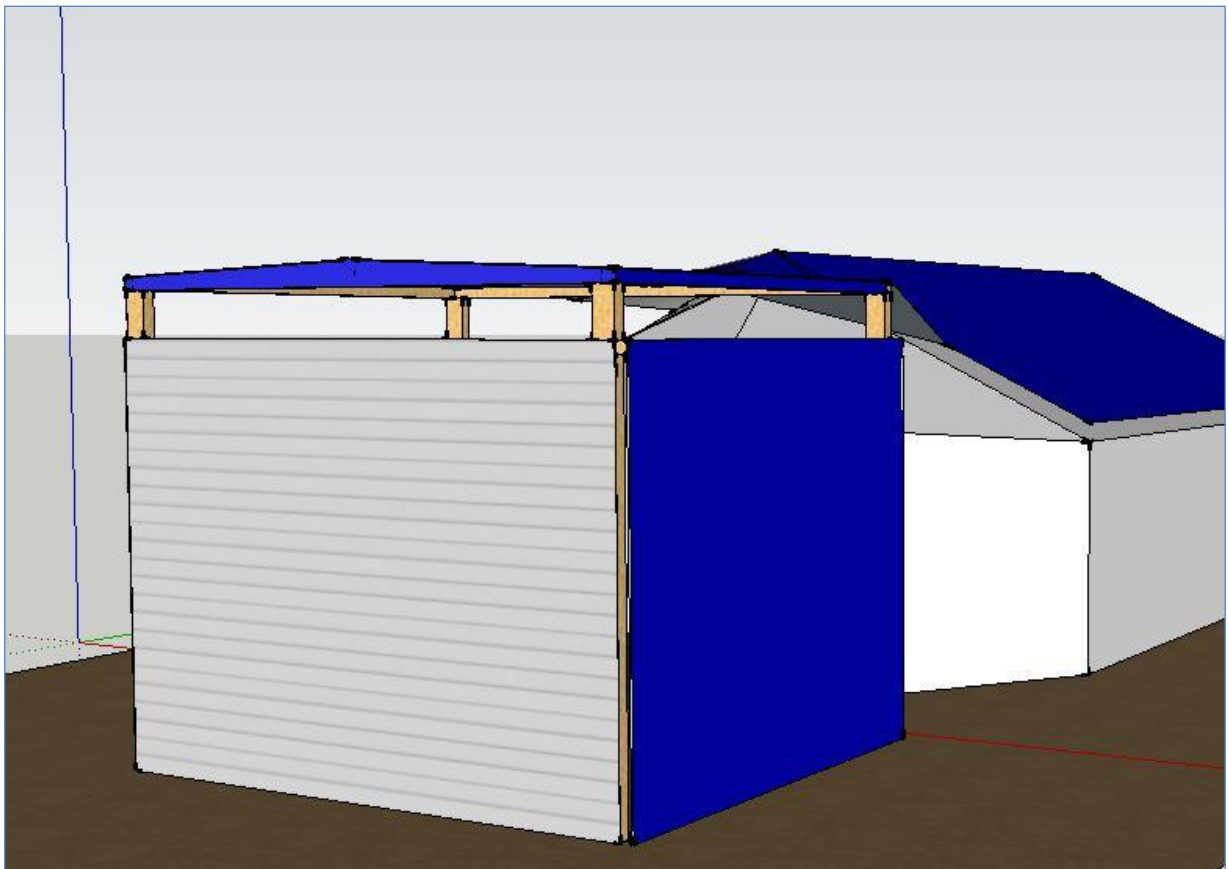
Approach to tent



Close Up



Heat Proof Shelter Corner



Plastic Sheet Wall



ANNEX 5 UNHCR Family Tent Winterization Kit

Depending on its availability in stock this kit could be distributed in conjunction with Package II to provide additional layer of insulation to the tent.

This kit includes the following items:

1. INSULATING FLOOR MAT, aluminized, fleece covered, 0.9x1.8m 5
2. Tent LINER
3. Tent PARTITION
4. FLOOR PROTECTION, heat resistant, for tent heater, 0.5x1m 1
5. SLEEVE, heat resistant, for tent heater fume pipe, 0.7x0.35m 1

For the purpose of this project item 5 is not required because the available heating stoves do not have flues. Item 3 is not necessary if the existing tents already have partitions in them.

Specifications

Insulating floor mat

The insulating mat is an assembling of three layers:

- First layer, on the ground-side, a plastic mat, double weave.
- Second layer, an aluminised canvas, aluminium face upward.
- Third layer, on upper-side, a fleece blanket.

The assembling is done with a heavy-duty ribbon strongly stitched all around the mat. The second and third layer are also stitched together, lengthwise in the centre, and crosswise in 3lines equally spaced.

Dimensions: 1.8m x 0.9m

At one end, the mat is open on the whole width, to allow accessing in between the plastic mat and the aluminised canvas. This opening closes with a fold like a pillowcase closing system. A pair of strong laces is sewn to the mat at one end in the centre, to secure the mat when rolled up for transport or storage.

Floor protection, heat resistant, for tent heater, 0.5x1m

The floor protection is composed of four to six plates of 4mm thick to cover a total surface of minimum 0.5mx1m.

Materials specification:

The plates are made of fibrocement.

The material is 100% fire-proof and rigid.

**Winterisation liner for the Family Tent**

The specification of this inner liner refers to the specification of the Standard Family Tent and of the Framed-Tent. For general dimension and shape, please refer to these two items.

Dimensions

All dimensions to fit the inner dimensions of the standard Family Tent and the Frame Family Tent. Centre height: 2.5m, width: 3.8m, wall height: 1.65m, base length: 3.8m.

Main material

Material weight: 130 g/m² ±10% in finished state except fire-retardant weight.

Tensile strength: ISO 13934-1, warp and weft 300N minimum.

Tear strength: ISO 9073-4, warp and weft 20N minimum.

Colour: yellow, beige, cream or sand.

Fire retardant: pass the CPAI84 chapter 6.



Annex 6

Package III: Heating

Analysis of Heating Options						
	Type (Annex 3)	Flame	Cost of Stove in JD	JD	Cost of Fuel /month in JD	Comments
1	Soba	Contained Flame with flue	25-30	Diesel 4liters	67,8	The is a fixed model which has the advantage of keeping the heater in one place in the porch and not moving it inside the tent. Only produced in Syria. Currently the factories supply capacity is limited. However, it is a recommended model to use in communal spaces due to its high heating capacity.
2	Kerosene Heater	Glass enclosed open Flame	35-40	Kerosene 2 litres	34	Most used model in the local market. It is portable. Produced in large scale in both China and Korea. Most economical option. ONLY procure models that comply the new Jordanian safety specifications and include a switch off mechanism if the heater tips over.
3	Pellet Stove	Contained	>100	Wood Pellets 10Kg	100	Most environmentally friendly option. Expensive initial cost. Wood pellets not available on the local market.



Based on the above analysis, the kerosene heater is recommended for the heating package. Cost of this package without fuel is **56.5 JD**. Cost including fuel is **165,3 JD**. The fuel is calculated on a running average of 0.25lper hour for 8 hours a day.

Package III: Heating

#	Item	Qty	Unit	Cost
1	Kerosene Heater	1	pc	40,0
2	Hot water bottle	2	pc	4,0
3	20 liters Jerry Can (red color marked with a skull on both sides)	1	pc	1,0
4	Safety Pamphlet on the use of the heater and fire and fumes hazards	2	pc	0,2
	Total Cost of Materials			45,2
	Transportation, loading, unloading cost (10% material cost)			4,5
	15% contingency			6,8
	Total Cost of Materials			56,5
5	Kerosene (14 litres/week for 11 weeks)@0,565JD/litre	154	litres	87,0
	Transportation, cost (10% material cost)			8,7
	15% contingency			13,1
	Total Cost of Fuel			108,8
	TOTAL COST (materials + fuel)			165,3

Hot Water Bottle

material 100% natural rubber

capacity 2 liters

design simple type ribbed, 100% leak protection
loading capacity 75 000 pieces per 1 x 40" container

lead time for 150 000 pieces 60 days, could have first shipment in 45-50 days



Heater Specification

Model: TS 77

Fuel	K-1 Kerosene
Tank capacity:	5,3 L
Heat output	2 500 Kcal/h
Heating area	16-18 m ²
Fuel consumption	0,25L/h
Dimensions	H x W x L = 0,47 m x 0,33 m x 0,33 m
Weight	6,4 kg
Thick & standard steel	
Woven glass fiber & cotton (for wick)	
Heat resistant reinforced glass	
High quality chrome plated	
Contained flame	
Safety mechanism	
Applicable to JS 213:2011 (Jordanian Standards Metrology)	



ANNEX 7 Customs Clearance Process

1. Organizational Requirements to obtain Duty Free Status

All UN agencies working in Jordan, need to have an official registration with the Ministry of Foreign Affairs in order to be able to operate in the country. For each Agency there is a counterpart Ministry which will provide all the necessary clearances such as Entry Visas, Stay permits for International staff, and on behalf UN Organisation approach Ministry of Finance for the necessary tax and customs exemptions.

Prior to importation or receiving funds from donor countries, all NGO's should be registered with the Ministry of Social welfare and an approval is issued. All official documents and related certificates are required prior to starting customs clearance. Customs exemptions are based on the agreement with the government at the initial stage of registration which defines which items are to be exempted.

2. Exemption Certificate Application Procedure

1/ Original Shipping documents (invoice, Bill of lading or Airway bill, Certificate of origin, Lab test certificate and Packing list)

2/ A covering letter from the counterpart ministry stating the reason for requesting all type of due exemptions to be addressed to Ministry of Finance

3/ Authorized clearing agent to handle the process with the customs authorities

3. Customs Clearance

1/ Clearance should be done through appointed agent with valid clearance license.

2/ Upon presentation of all necessary documents such as Invoice, Packing List, Certificate of Origin, Exemption of Import Duties and Tax exemption, a clearance order will be issued and the consignment will be released to the clearance agent.

Goods Customs / Tax exemption starts by signing a contract and immediate application to Ministry of Finance. Process may take up to seven days. Customs clearance if all documents are available (including exemption certificate) should last up to 3 days upon arrival of goods. If goods arrive by ship port handling process depends on congestion of Aqaba port but should not exceed seven days to release the goods (including unloading and storage in bonded warehouses followed by customs clearance process).



In case of road crossings Customs Clearance should not last more than a day or two (providing border crossings are not congested and documents are in good order). If goods are coming from UAE they will be using Al Umari border crossing (expected lead travel time Dubai to Amman max 7 days including loading / unloading for 40" container truck), while goods sourced from KSA could include also Ad Durra border crossing towards Aqaba or Al Mudawwara further east. All border crossings are opened 24 hours.

Road Conditions

Jordan has a well-developed road infrastructure with 7,999 kilometres of paved highways. The road system is centralized around Amman, which connects the capital to major cities and surrounding countries.

This road is the main route from the Port of Aqaba to the Capital and the rest of the country. It is built with high standards (European) and maintained continuously. Two sides with fuel stations, restaurants, Civil Defence with ambulances and Road traffic Police and other facilities that helps the trucks and road users to have a safe journey (coffee shops, small supermarkets restrooms etc..).

Distance between Aqaba and Amman is 328 km and it is passable by:

- Heavy trucks (15 - 23 tons) (6x6 or 6x 4) with trailer
- Heavy trucks (15 - 23 tons) (6x6 or 6x 4) without trailer
- Light trucks (8 - 12 tons) (6x6) with trailer
- Light trucks (8 - 12 tons) (6x6) without trailer
- Light trucks (3 - 8 tons) (4x4), tractors (< 40 tons)
- Light vehicles passengers, light vehicles pick-up, motorbike
- Non-motorized traffic

Distance from Amman to Zaatari camp is 80 km and road conditions are same as for Aqaba – Amman road. Time needed to reach Zaatari camp is 90 minutes by car (pending city traffic congestion) and 2,5 – 3,5 hours by truck (pending on size of truck & congestion).



ANNEX 8 Suppliers and Prices

Organizations Contacted for Suppliers Information

UNHCR
JHAS
WFP

Suppliers Contacted including those who have not sent their quotations

Company	Origin	Goods From
Thorex	RSA	China / Turkey
RVB	Holland	China
Alpinter	Belgium	Pakistan
Toyop	India	India
Bayt Al Tatrez	Jordan	Jordan
Fylaka	Jordan	Jordan
FBS Tekstil	Turkey	Turkey
Amer Juma Trading Est	Jordan	Korea / China
Atakan ev tekstili	Turkey	not responded yet
NRS International	UAE	supplies only standard relief items
Techno Relief Services	India	Could not find a stove and supplies only standard relief items
Relief Supplier	India	not responded yet
Amer Masri Clothes	Jordan	not responded yet
Rami Clothes	Jordan	not responded yet

Suppliers' List

Company name	origin	contact person	e-mail	phone	web	Items
Thorex	RSA	David Meyer	david@thorex.co.za	+2711 608 2213/ 5	www.thorex.com	all
RVB	Holland	Rene Van Bardwijk	rene@rvb.nl	+971502471306	www.rvb.nl	all
Alpinter	Belgium	Agathe Tiberghien	at@alpinter.com	+32 55 23 17 51	www.alpinter.com	all
Toyop Relief Pvt Ltd	India	Sachin S Shah	sachin@toyop.com	+919821080208	www.toyop.com	all
Fiylaka	Jordan		filkafilka@gmail.com	0795206617		hot water bottles
Bayt Al Tatrez	Jordan		info@tatrez.com	0795558187		clothing
Irjan Pharmacy	Jordan	Dr. Hani S. Qadri	drhqadri@hotmail.com	0795101554		hot water bottles
Relief Supplier	India	Mr. KUNAL GARG	info@reliefsupplier.com	00 91 9871 540056	www.reliefsupplier.com	relief items
BASHITI Hardware	Jordan	Marwan Bashiti	info@bashitihardware.com	+ 962 79 8810576	www.bashitihardware.com	hardware, construction material
Paramount Tarpaulin Industries	Pakistan	Munir Pakistani	sales@paramounttent.com	+92 21 2565447	www.paramountpak.com	relief items
Techno Relief Overseas (I) Pvt Ltd	India	Preeti Kamath	preetik@technorelief.com	+91 22 2687 3811-16	www.technorelief.com	relief items
Tawlefah for Scrap Trading Co.	Jordan	Eng.Mohammad Mansi	mansiwork@orangepro.io	00962 6 475 2020		hardware, construction material
F.B.S. Tekstil	Turkey	Begüm Selen Yıldız	selen@fbstekstil.com.tr	+902324358535	www.fbstekstil.com.tr	textile
DCZ TEKSTILE DIS TICARET LTD STI	Turkey	ZELİHA ATAĞLI	zelihaacanakli@gmail.com	+905335702212	www.dcztekstil.com	textile
Amer Juma Trading Est	Jordan	Amer Juma	amerjuma@hotmail.com	079 58 61 388		trading, stoves
Arab Building Materials & Co	Jordan	Nazih Hadhud	nazihhadhud@hotmail.com	079 994 99 77		steel, wood
Ali H Abbas & Brothers Co	Jordan	Mohammed Abbas	ali@abbascosteel	078 607 03 98		steel, wood
Agel K Khalifah & Bros Trading	Jordan	Abdullah Khalifeh	info@khalifah-bro.com	079 570 64 64		metal works
ATACAN AMBALAJ PLASTİK TEKSTİL	Turkey	Şaban DAVUT	info@atacanevtektili.com	+90 532 365 10 11	www.atacanevtektili.com	blankets
NRS International	UAE	Asya Abaeva	asya.abaeva@nrs-international.com	+971 561748022	www.nrs-international.com	relief items

Item Prices and Lead Time

#	Item	Size	Qty	Unit	Thorex	RVB	Alpinter	Toyop	Fylaka	Tatreez	Paramont	Fylaka	Tatreez
1	Women's Shawl	N/A	2	pc			6,6 USD			1-2 JD	4,55 USD		1,4-2,8 USD
2	Women's Legging	L & M	2	pc			4,14 USD			3-5 JD			4,2-7 USD
3	Socks	Adults	3	pair	1,65 USD		0,75 USD			1 JD			1,4 USD
4	Socks	Children	2	pair	1,21 USD		0,52 USD			0,5 JD			0,7 USD
5	Women Fleece Jacket	L & M	1	pc	6,20 USD	7,93 USD	4,8 USD			8 JD	6,15 USD		11,2 USD
6	Men Fleece Jacket	XL & M	2	pc	6,20 USD	7,93 USD	4,8 USD			8 JD	6,45 USD		11,2 USD
7	Childern	2, 6, 9	2	pc	6,20 USD	7,43 USD	3 USD			8 JD	5,5 USD		11,2 USD
8	Woolen Hat Men	N/A	2	pc	1,96 USD	2,59 USD	2,2 USD			1,5 JD			2,1 USD
9	Woolen Hat Kids	N/A	3	pc	1,96 USD		0,88 USD			1 JD	1,69 USD		1,4 USD
10	Hot water bottles	2 litres	5	pc	1,17 USD				1,8-2 JD			2,52-2,8 USD	
11	Acrylic Mink Blankets	2,4 kg	5	pc	11,5 USD			18,33 USD					
12	Childrens blankets	2 litres	5	pc	1,20 USD	1,56 USD		1,50 USD					
	Delivery to				Aqaba	Amman	Karachi	Amman	Amman	Amman	Aqaba		

Unit price cheapest company (qtys/family)

5,6
12,6 assumed 3 per family
2,25
1,04
4,8
9,6
6
4,4
0,88
5,85
57,5
3,6 took 5 big blankets and small one

Total 114,12 small blankets are really small

This package is for a family of 5

Assuming there is a father, a mother and 3 children. 2 kids are less than 10 and 1 older than 10

Delivery Time

Thorex 60 - 70 days (blankets) which can be broken in to weekly lots so first deliveries could be in 50 days

RVB 50-60 days

Alpinter 45 - 50 days blankets Transit to Aqaba 20 days, 20" container 1050 USD, 40" container 1700

Toyop 45-50 days blankets

Paramont 30 days shawls 60 days fleece jackets, 17 days transit from Karachi