

## Technical Guidance for Shading Kit

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## 1. INTRODUCTION

This guidance offers advice to agencies providing assistance to displaced & non displaced households living in sub-standard conditions in the earthquake affected regions of Türkiye. The purpose of seasonally-related assistance is to support vulnerable households cope with extreme summer temperatures, through the integrated support to shelters alongside the provision of household and NFIs.

In this document, 'climatisation' refers to improvements or support to shelters to withstand the extremes of temperature or climate. Seasonal NFI support refers to the provision of NFIs and other items to allow individuals and households to maintain comfort and protection from temperature and climate.

## 2. CLIMATIC CONDITIONS

In southern Türkiye the average summer temperature in July/August reaches around 34 degrees Centigrade , with temperatures generally above 20 degrees from April until they fall again in late October.

## 3. OBJECTIVES OF CLIMATISATION ASSISTANCE

Shelter and NFI seasonal support are closely linked. It is generally found that families who require shelter seasonal support are likely to also require NFI seasonal assistance, therefore assessments and interventions should take into consideration the shelter conditions as well as the availability of household items.

Seasonal shelter support is provided to ensure affected households are protected from the direct effect of harsh weather, and sufficient NFIs to maintain health and well-being during extremes of temperature.

## 4. ASSISTANCE TIMEFRAMES

An annual strategy review should commence approximately six months ahead of the start of each summer or winter and close within three months. Timelines will adjust based upon the planning cycles of partners to ensure that in kind items are procured before the start of each season.

## 5. OVERARCHING CONSIDERATIONS

### 5.1. Settlement conditions




The following should be considered in advance and during seasonal preparation:

- Maintenance of camp / centre infrastructure
- Solid waste disposal
- Avoiding access being blocked by shading kit installation

## 6. SUMMER ASSISTANCE

For those living in tents, temporary shelters and containers, the extreme heat of the summer in southern Türkiye makes day to day life insufferable. The Shelter Sector recommends provision of shading to help improve thermal comfort.

### 6.1. Types of intervention

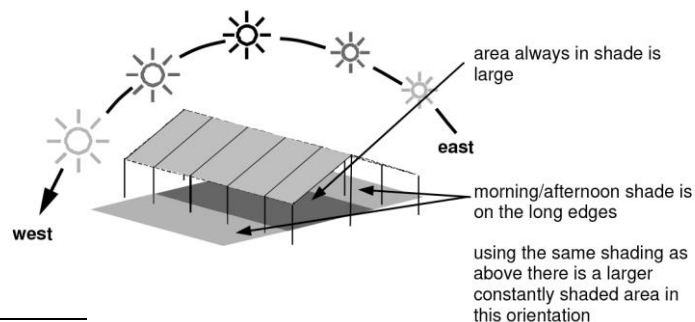
Icon	Type	Description
	<b>Household Shade</b>	<ul style="list-style-type: none"> <li>• Shading kits distributed at HH level</li> <li>• Can use standard Emergency Shelter Kits</li> <li>• HH led initiative but with technical support if needed</li> </ul>
	<b>Tent Shade</b>	<ul style="list-style-type: none"> <li>• Fixed shade over whole tent</li> <li>• Can be constructed in rows, timber or steel posts, concrete foundation</li> <li>• Shade netting is lighter and less affected by high wind</li> </ul>
	<b>Community Shade</b>	<ul style="list-style-type: none"> <li>• Shade provided in available space per block or unit of tents</li> <li>• Multi-purpose use</li> </ul>

### 6.2. Shading <sup>1</sup>

Shading can be constructed out of a variety of materials, from mesh netting and plastic sheeting to plywood and corrugated galvanised iron sheeting, among others.

In hot climates such as Türkiye, shade is required to protect from UV radiation, preventing dehydration, and overheating. Shading can also protect structures such as water tanks (reducing evaporation and the degrading effect of UV light on chlorination), supplies, and equipment. Shade over a shelter prevents degradation of tent and tarpaulin materials by UV radiation, and reduces the internal temperature of the shelter.

Creating communal shade allows additional space for working and socialising, while shaded extensions to shelters permits some household functions more space outside.



<sup>1</sup> Acknowledgments: MSF & Shelter Centre; Michael Waugh, NRC; AAF; IOM; NRC

### 6.3. Shading Kits

Shading can be constructed out of a variety of materials, from mesh netting and plastic sheeting to plywood and corrugated galvanised iron sheeting, among others.

### 6.4. Shading Extension Kit – For Individual Tents and Shelters

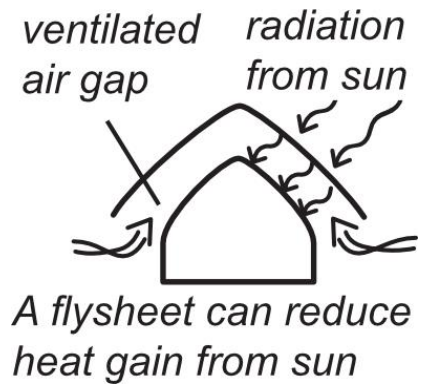


Shading Extension for Tents/Shelters

Photos: Courtesy of IOM

Shading Extension for Tents/Shelters							
#	Item description	No.	Unit	Unit cost / TL	Cost / TL	Specifications description	Notes
1	Shading material*	4 x 6	m <sup>2</sup>	TL xx /m <sup>2</sup>	TL x	(Example) Sunshade net: 100% HDPE; width 4.5 x 6m length; shade rate 70-80% or Plastic Sheeting (white), sun reflective on both sides	
2	Timber poles	5	piece	TL x	TL x	2.15m long. Section size 50 mm nominal diameter	Straight and free from defects. Use a standard sample to demonstrate quality when ordering in bulk
3	Nails	0.25	kg	TL x	TL x	Steel. Supplied in a sealed bag. Length: 75mm (3"); Diameter: 3 mm	
4	Rope	10	m			5mm diameter, polypropylene or nylon or other polymers (black). Min 3 strands.	For tying down the end of the sheeting resting on the tent/shelter. Fix to tent pegs or a cut off from the poles

## 6.5. Shading Kit – Over Entire Tent



### Shading over entire Tents/Shelters

Photos: Courtesy of AAF/NRC

Shading Over Entire Tent/Shelter							
#	Item description	No.	Unit	Unit cost / TL	Cost / TL	Specifications description	Notes
1	Shading material*	27	m <sup>2</sup>	TL xx /m <sup>2</sup>	TL x	(Example) Sunshade net: 100% HDPE; width 4.5 x 6m length, shade rate 70-80%  or Plastic Sheeting (white), sun reflective on both sides	
2a	Steel poles	4	piece	TL x	TL x		Select <b>either</b> 2a <b>or</b> 2b
2b	Timber poles	4	piece	TL x	TL x	3m long. Section size 100mm x 100mm nominal	Select <b>either</b> 2a <b>or</b> 2b
3	Nails	1	kg			Steel. Supplied in a sealed bag. Length: 75mm (3"); Diameter: 3 mm	

## 6.6. Shading Kit – For Communal Areas



Shading for community space

Photos: Courtesy of AAF/NRC

EXAMPLE COMMUNITY SHADING KIT (for a shaded cover of 41m <sup>2</sup> ) <sup>2</sup>							
1	Shading material*	m <sup>2</sup>	150	/m <sup>2</sup>		(Example) Sunshade net: 100% HDPE; width 4.5 x 6m length; shade rate 70-80%	Basic shading material for domestic use not for industrial agricultural purpose as it is much higher in cost. Either Black or Green in colour.
2a	Timber poles	piece	12			2.3m long. Section size 100mm x 100mm nominal	Select <b>either 2A or 2B</b>
2b	Timber poles	piece	12			2.3m long. Section size 100mm diameter nominal	Select <b>either 2A or 2B</b>
3	Ridge poles	piece	2			5m long; 150mm wide	

<sup>2</sup> From *Shade Nets: Use, deployment and procurement of shade net in humanitarian relief environments*, MSF & Shelter Centre, 2006, pp. 18-21

4	Rope	roll	1			Nylon or similar, diameter. 9 to 12 mm diameter. Woven with 2 or 3 strands, with the possibility of being unravelled. Length: 200m, in a roll. Preferred colour: Black / dark green.
5	Tent pegs or stakes	piece	28			Tent pegs, 200 to 300 mm length after bending; made of iron reinforcing bar of 10 mm diameter, with a hook bent on one end, “candy cane” shape, or a cross shape.
6	Strong twine	m	6			6mm; for stitching
7	Nails	kg	1			Steel. Supplied in a sealed bag. Length: 75mm (3”); Diameter: 3 mm
8	Community toolkit <sup>3</sup>	kit	-	-		(Example contents) Handsaw, shovel, wheelbarrow, claw hammer, pickaxe

\*Shelter grade tarpaulin can be used in place of the sunshade net specified above with improved structure to support the increase in weight.

The table above gives an example of the materials needed for the construction of a community shade structure for a communal kitchen, for example. Community shading kits should be tailored in size, design and composition to address identified needs, as well as coordinated and consulted with site / settlement management authorities and end users.

### 6.7. Fixing shading material<sup>4</sup>

The guide produced by ICRC & Oxfam outlines the best practices for fixing plastic sheeting. Some examples in the guideline on how to spread the load to prevent the plastic sheeting from pulling through are:

<sup>1</sup> From Shelter Cluster Türkiye Technical Guidance on Emergency Shelter Kits (ESK), <https://www.sheltercluster.org/response/Turkiye>

<sup>2</sup> From *Shade Nets: Use, deployment and procurement of shade net in humanitarian relief environments*, MSF & Shelter Centre, 2006, pp. 18-21

<sup>3</sup> From Shelter Cluster Türkiye Technical Guidance on Emergency Shelter Kits (ESK), <https://www.sheltercluster.org/response/Turkiye>

<sup>4</sup> Plastic Sheetting – A guide to the specification and use of plastic sheeting in humanitarian relief – ICRC & Oxfam

### Fixing to Timber

Standard nails will easily pull through plastic sheeting as they have small heads.

Standard nails can be improved by bending or nailing them through folded plastic sheet or rope. U-shaped fencing pins can be used.

Standard nails can be improved using washers or battle caps. Alternatively, domed head nails can be used.

Timber battening is good to spread the load.

Plastic sheeting should be folded over on itself at connection points.

Plastic sheeting is best fixed to spread the load along the (smoothed) edge of the supporting structure.

**Reinforcement Bands:** standard plastic sheets have reinforcement bands; all fixings should pass through the bands to add strength to fixings.

*With only a few fixing points, this sheeting is likely to pull free.*

**bad**

*With many fixing points, this sheeting is likely to last longer.*

**good**  
max. 30cm

*Fixing points should be close together. A maximum of 30 cm apart is suggested*

### Fixing to the Ground

When plastic sheeting is connected directly to the ground, 50cm of additional plastic is required on each side for burying in trenches. If timber is available, then the plastic sheeting can be nailed to timber runners that are pegged to the ground (or connected to the foundations).

Whilst sandy soils will not grip the plastic sheeting as well as other soil types, it may be very difficult to dig trenches in some rocky soils. Choosing a method for fixing the sheeting to the ground therefore depends upon the soil conditions as well as the availability of materials.

## 6.8. Things to consider

- If the province/district are known to be subject to strong winds or extreme weather, such as summer storms, shades need to be installed to resist maximum wind speeds and/or the warning systems need to be put in place to take down shades.
- If procuring timber poles in bulk, consider impact to environment.
- Guidance should be provided on how to brace individual shading with ropes to avoid trip hazards.