

Technical Guidance on Climatisation and Seasonal Assistance for Humanitarian Programs in Iraq

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1. Introduction

This guidance is created from seasonal support documents produced from 2014 onwards in Iraq, with the collaboration of Shelter-NFI Cluster partners, the WASH Cluster, the CCCM Cluster and the Cash Working Group. It offers advice to partners providing assistance to conflict affected households living in sub-standard conditions across Iraq and those who require additional support to meet basic needs during a particular season. The purpose of seasonally-related assistance is to support vulnerable households cope with extremes in temperature and other climatic conditions during the winter and summer months, through integrated support to shelters and the provision of household and NFIs.

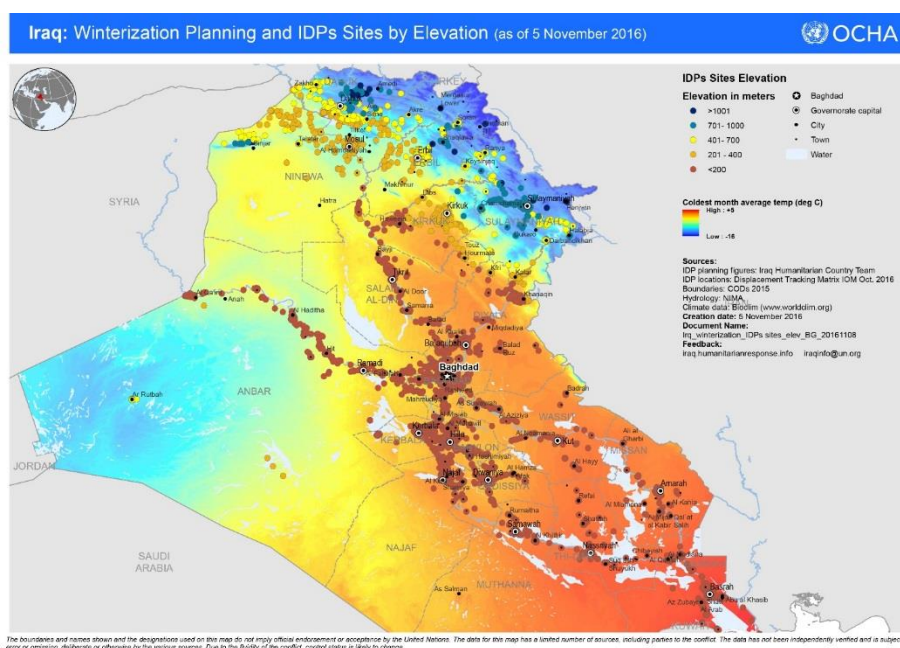
In this document, 'climatisation' refers to improvements or support to shelters to withstand the extremes of temperature or climate. Seasonal NFI support refers to the provision of NFIs and other services to allow individuals and households to maintain comfort and protection from temperature and climate.

2. Climatic Conditions

Iraq has long, hot, dry summers and short, cool winters. The average temperatures range from over 40°C during the hottest months of July and August, to below freezing in winter. Significant variations occur across the country due to the presence of both mountainous terrain and large, flat desert plains. The north of Iraq into the mountains of Kurdistan experiences cooler summers and colder winters with significant snow fall and wind whilst central and southern areas are hotter during the summer and winter, with the exception of areas of desert which can also be cold during the winter.

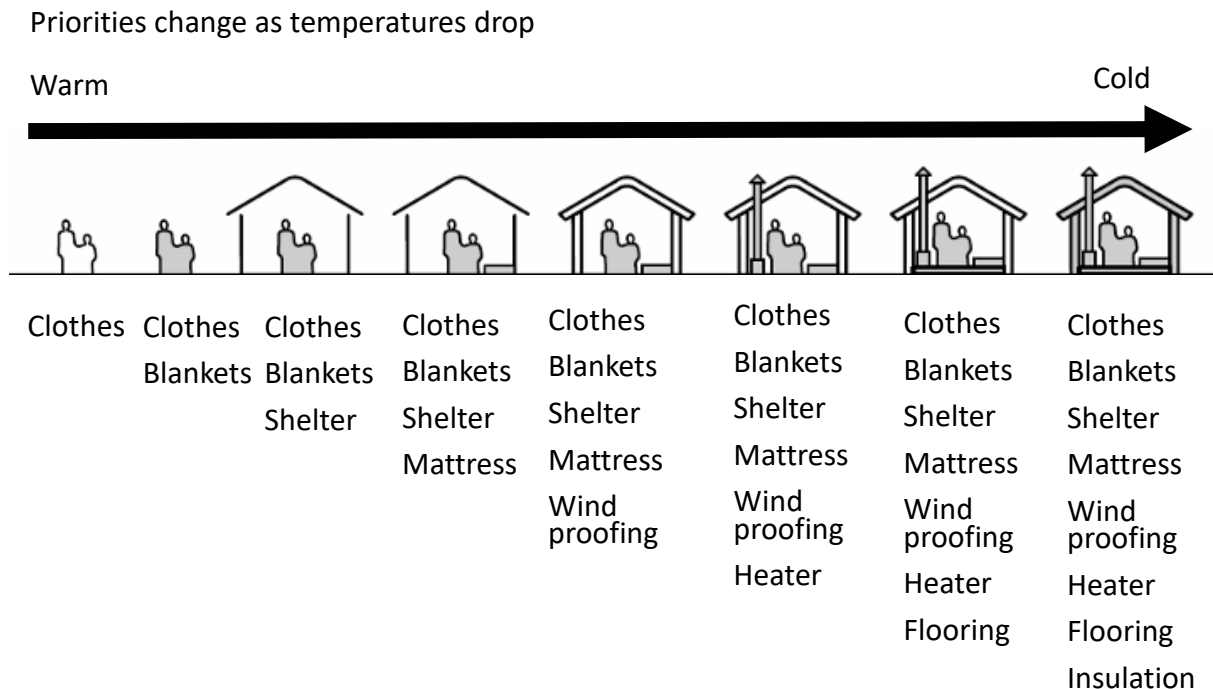
The majority of precipitation occurs from December to April, in the mountainous areas of the north however areas of southern Iraq, including Baghdad, have seen in recent years, high levels of flooding.

Two kinds of wind are encountered – dry, dusty gusts from the south and southeast from April to early June and late September to November, and a steady wind from the north and northwest experienced from mid-June to mid-September. Dust storms accompany these winds, and can cause damage to infrastructure, shelter and health alike.



3. Objectives of Climatisation Assistance

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.



Where heating or appropriate shelter NFIs are not available, increase the distribution household NFIs, such as clothing, blankets and mattresses

Source: [IASC - Selecting NFIs for Shelter](#)

4. Assistance Timelines

The definition of summer and winter used by humanitarian partners is from June to September, and November to February, inclusive and respectively. An annual strategy review should commence three months ahead of the start of each summer in March and winter in August. Timelines will take into consideration the planning cycles of National or Local Government and partners, ensuring that both the strategy is achieved before partners finalize plans and that in kind items are procured before the start of each season or that cash-based modalities are arranged on time.

Based upon partner PDM and lessons learnt from previous years, the timing of support is critical to meet the primary needs of beneficiaries in relation to coping with extremes of climate and temperature and avoid non-use or selling of assistance. It may also mean that shelters are not suitable for the respective season, putting families at risk from extremes of temperature and other seasonal occurrences such as damp, flooding and dust. Finally, repair and maintenance of settlements and infrastructure as well as installation of additional support is required to ensure that conditions remain safe, healthy and hygienic, and supportive of adequate shelter and access to basic services.

5. Specific Needs Related to Climatisation

Shelter and NFI climatisation assistance should be provided to all families with increased seasonal need arising from critical and sub-standard shelter conditions, limited access to NFI or any other inability to meet seasonal minimum standards. This is defined as vulnerable families or individuals that lack the means to maintain safety, health, well-being, privacy and dignity during extremes of temperature or exposure to climate. Humanitarian needs of other extremely vulnerable population groups such as the host community in similar situations should also be taken into consideration.

Critical and sub-standard shelter conditions or limited access to NFI is defined as:

Lack of climate adequate shelter	Lack of climate adequate NFIs
• Critical non-residential shelters including unfinished, abandoned building, tents, informal settlements and collective centers • Shelters with broken walls • Shelters with damaged or leaking roofs • Shelters with no or broken windows / doors; or where openings are unsealed • Overcrowded shelters with less than 3.5m² covered living space per person. Overcrowded shelters shared by multiple families are a priority • Shelters in areas affected by seasonal flooding • Shelters without enough privacy, consequently obliging women to wear restrictive clothing at all times • Lack of shading (covered living space, shading on tops of tarpaulins and tents, etc.)	• Lack of mattresses and blankets • Lack of means for cooling/heating drinks and meals • Lack of means for cooling /heating spaces • Lack of weather appropriate clothing • Lack of carpets or other materials for floor insulation

Special priority should be given to families where one person is more vulnerable to extreme heat / cold, e.g. elderly with cardiovascular disease, people with reduced mobility, pregnant female headed household etc.

5.1. Health conditions affected by heat

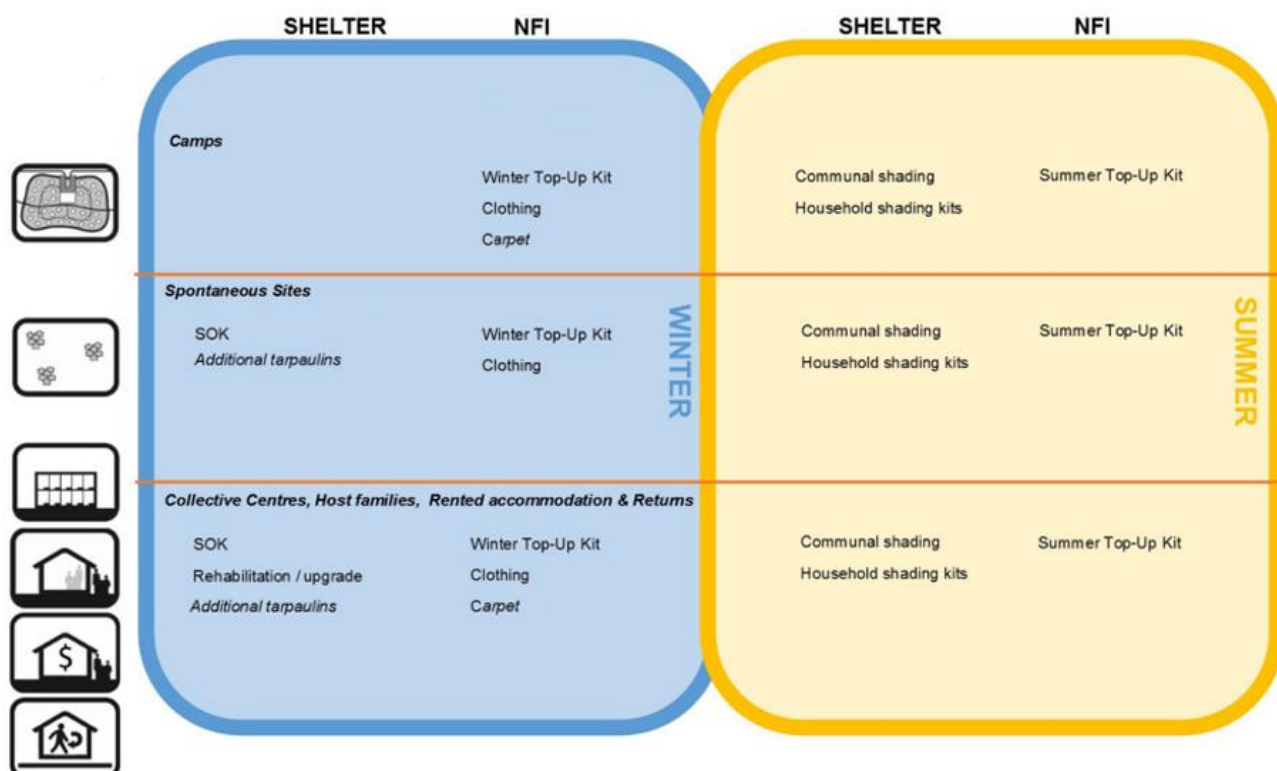
The following health conditions¹ are adversely affected by heat:

Health conditions	Mechanism	Selected evidence
Diabetes mellitus, other endocrine disorders	Types 1 and 2 diabetes are associated with impairment in skin blood-flow response, which may play a role in reducing heat dissipation. Sweating responses may also be reduced. Metabolic alterations can occur	Bouchama et al., 2007 Kovats & Hajat, 2008 Kenny et al., 2010 Schifano et al., 2009
Organic mental disorders, dementia, Alzheimer disease	Reduced awareness of heat-related risks and adaptive behaviours, high dependency level, interaction of many medications with the body's ability to thermoregulate	Belmin et al., 2007 Faunt et al., 1995
Substance misuse disorders	Changes in physiological response mechanisms and changes in behaviour due to psychoactive substances and alcohol	Kovats & Hajat, 2008
Schizophrenia, schizotypal and delusional disorders	High level of dependency, prescribed psychotropic drugs	Bouchama et al., 2007 Kovats & Hajat, 2008
Neurological diseases, e.g. Parkinson's disease and those involving cognitive impairment	Potentially limited awareness and mobility; High level of care dependency, prescribed psychotropic drugs	Kovats & Hajat, 2008
Cardiovascular diseases (including hypertension, coronary artery disease, heart conduction disorders)	Impairment of thermoregulatory responses and high risk of acute coronary and cerebral thrombosis, reduced cardiovascular and thermoregulatory responses and changes in blood composition due to dehydration (1% of body weight deficit) Changes in renal function may be related to life-threatening cardiac rhythm disturbances in older patients Worsening the existing condition, cardiovascular, thermoregulatory and blood changes in hypertensive patients followed by a sudden fall in arterial pressure may lead to fatal cerebral ischaemia. Peripheral circulatory changes may lead to reduction in core-temperature regulation	Carberry, Shepherd & Johnson, 1992 Keatinge et al., 1986 Kenny et al., 2010
Diseases of the respiratory system, chronic lower respiratory disease	Combined effect of high temperature and air pollution on the pathogenesis and clinical history of respiratory diseases (i.e. asthma, chronic bronchitis) Worsening of existing condition (i.e. chronic obstructive pulmonary disease – COPD), due to hyperventilation and dyspnoea) difficulty in dissipating excess heat (e.g. peripheral vasodilatation, hypovolaemia)	Ren et al., 2008 Sprung, 1980 Stafoggia et al., 2008 Schifano et al., 2009
Diseases of the renal system, renal failure, kidney stones	Diminished renal function due to the electrolyte and water imbalance consequent to hyperthermia and dehydration, especially in elderly people	Flynn, McGreevy & Mulkenin, 2005
Obesity	Sensory impairment to heat, or reduced capacity for heat dissipation due to the smaller ratio of body surface area to body mass that hampers sweat evaporation	Herman et al., 2007, Kenny et al., 2010
Other chronic diseases	Examples: absence of sweat glands in people with scleroderma, high loss of electrolytes through sweating in those with cystic fibrosis	Orenstein, Henke, Green, 1984 Paquette & Falanga, 2003

¹ From [World Health Organisation, Public Health Advice – On preventing health effects of heat, 2011.](#)

6. Recommended Seasonal Assistance

The diagram below summarises recommended seasonal Shelter and NFI assistance. It is assumed that affected households will already have received NFI support but that it is insufficient to ensure health, safety and well-being during extremes of temperature and weather. Recommended seasonal items (e.g. cool boxes, jerry cans etc.) to be included as part of a kit have been suggested.



Also refer to [IASC - Selecting NFIs for Shelter](#) for possible further guidance.

7. Inter Cluster Considerations

7.1. Protection

During seasonal interventions the following points should be considered:

- Distributions of items during period of significantly increased or decreased temperature and precipitation should be undertaken only when adequate shade or shelter, heat and water is provided for all people queuing.
- To the extent possible, type of location of communal shade should be constructed based on community feedback, taking into consideration cultural preferences such as those related to gender and age.

7.2. CCCM

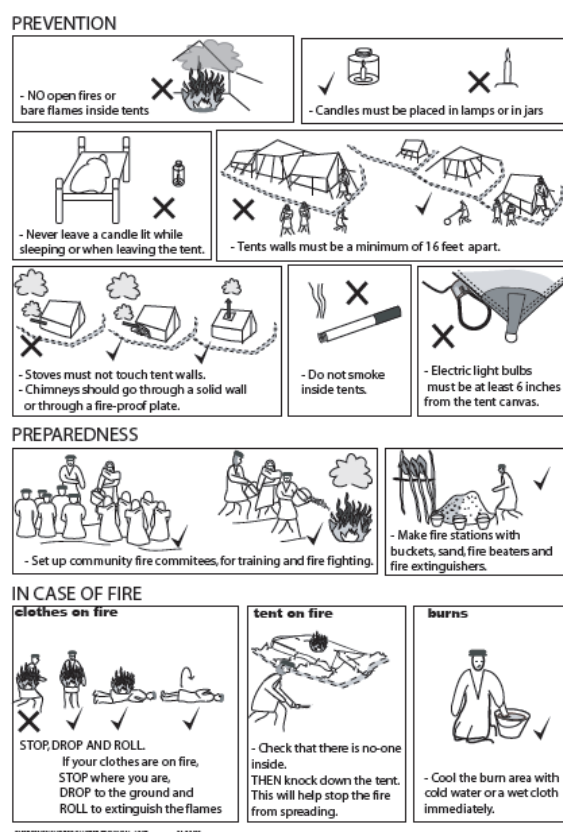
The following settlement conditions should be considered in advance and during seasonal preparation:

- Maintenance of camp and communal centre infrastructure
- Solid waste disposal sites
- Impeded surface water drainage
- Flood prone areas and alternative locations for multiple night emergency shelter
- Accessibility issues caused by the deterioration of roads

Seasonal interventions create additional fire and electrical safety risks and the following should be considered:

- SNFI Cluster partners should support CCCM Cluster partners, camp management and local authorities in fire prevention training
- Fire extinguishing items appropriate to the settlement type should be provided and maintained
- Gas appliances are not recommended for use in tents without floors. For more detailed information see [Shelter Cluster Iraq: Technical Guidance Note on NFIs](#)
- The distribution of electrical or kerosene-fed appliances should be combined with proper information campaigns and trainings, to ensure beneficiaries are informed of safe operation and supported as required in installation and maintenance.
- Appliances should have a child safety switch or mechanisms to avoid tipping or burning if touched

FIRE SAFETY



7.3. WASH

During winter flooding can reduce access to sanitation facilities, and can result in stagnant water leading to unhygienic conditions and an increase of vectors. Preparedness and response activities would include digging, deepening and clearing drainage channels in public areas (e.g. paths) as well as training in digging and maintaining drainage around shelters, to ensure rain water flows to either natural or municipal drains. To ensure continued access to WASH facilities, gravelling of roads used by desludging and water trucks or of pathways leading towards WASH facilities should be considered. Activities should consider flood mitigation measures at both community and household levels, comprising surface water drainage, ballast to raise areas at risk and sandbags surrounding family shelters.

During summer water conservation activities should be undertaken in conjunction with the WASH cluster and consideration given to the use of mechanical cooling which requires water.

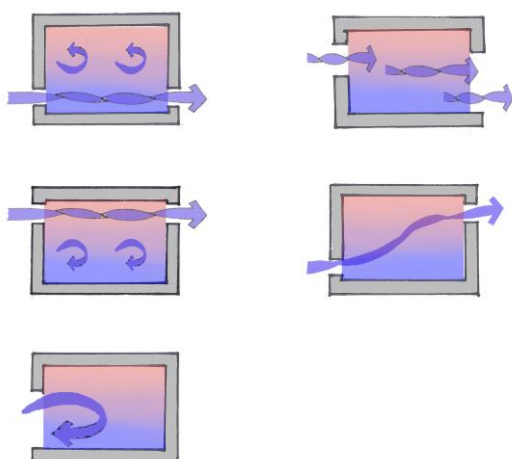
Most of the WASH related items and actions are needed year round however, in preparation for winter heating of bath water may be considered. Given the high safety risks, locally-made immersion water heaters, and kerosene heaters are not recommended. Solar, gas cylinders or wall mounted electrical installations are recommended if feasible.

7.4. Shelter

Ventilation is as important in winter as in summer. Good ventilation results from 1) building / shelter location, orientation and massing and 2) sizing and placing of openings. As the direction of the prevailing wind (and associated problems, such as sand storms) may change throughout the year, the ability of inhabitants to adjust openings to encourage breezes or prevent draughts is recommended.

In winter, families may not wash clothes and fabrics as often, and they may not dry sufficiently. Shelters are increasingly enclosed, as reducing cold draughts also means reducing ventilation, leading to stale and damp internal environments. This leads to a marked increase in respiratory illnesses during winter as well as skin diseases, including scabies. Support from Shelter and NFI actors during such preparedness and response activities for WASH-related illnesses may be required - for example, in the distribution of additional NFI kits to replace those that may have been contaminated, in the dissemination of key health and hygiene information, or the installation of facilities / features that support good health and hygiene.

Ventilation of cooking stoves and cooking areas, and of heaters / heated spaces is strongly advised to reduce the risk of fire and respiratory disease. The combined size of ventilation openings in a room should be a minimum 5% of the floor space. This may be achieved by using openable or fixed ventilation means (air bricks, louvers etc.). Agencies may also consider the supply of agriculture netting or shading net for temporary internal partitions, which may help to promote privacy while allowing some cross-ventilation. Agencies working in Shelter and NFI in abandoned, unfinished, sub-standard or damaged buildings should ensure that it is possible for households to open some windows in the summer months to promote cross ventilation.

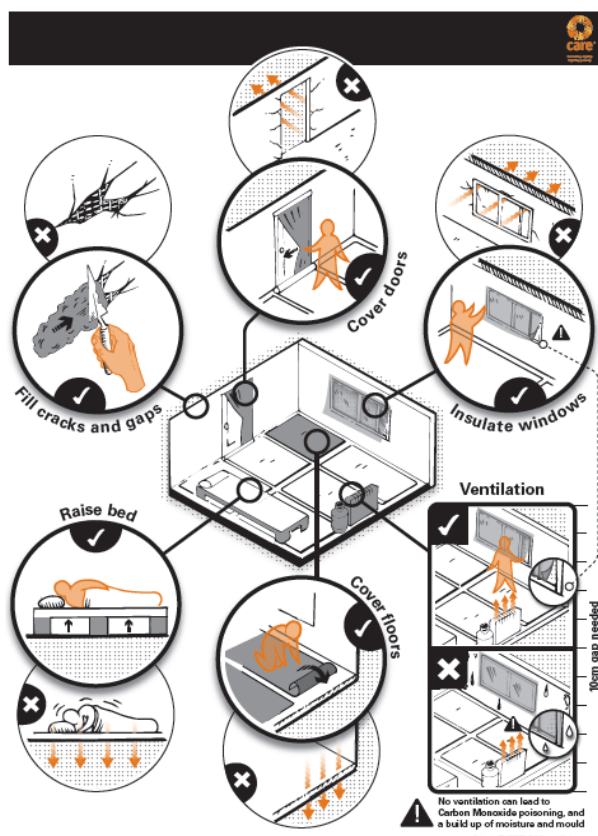


Where possible install ventilation openings in 2 walls to allow for cross ventilation. A smaller inlet and larger outlet will increase the air flow into the space, enabling the volume of air to be changed more regularly and increasing a breeze's cooling properties. Placing openings across from each other but not directly opposite maximise the area that can be effectively ventilated / cooled. Locating air inlets low down (where air is coolest) and outlets high (where air is warmest) increases ventilation through the stack effect.

8. Winter Assistance

8.1. Sealing off shelter

The below diagram provides the essential elements to be addressed in any shelter. For buildings, refer to the [Technical Guidance on Unfinished and Abandoned Buildings](#).

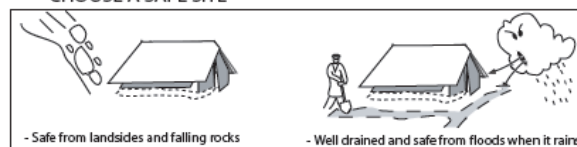


Images by CARE International and the Global Shelter Cluster

WINTERISING TENTS

This guide contains some simple suggestions on how tents can be upgraded if families have the correct materials.

CHOOSE A SAFE SITE



IMPROVE TENT



EMERGENCY SHELTER CLUSTER TECHNICAL UNIT - 2012/06

8.2. Winterising tents

UNHCR Standard family tents can be fitted with a winterization kit which includes: winterization liner, partition, chimney sleeve, insulating mats and floor protection for the wooden stove. The tent winterization kit does not include any stove/heater or fuel. These items must be purchased separately, depending on the fuel type available in the area. For tents without standardized winter kits, existing resources must be customized on site.

8.3. Winterising prefabricated structures

Prefabricated caravans are used as family shelter, kitchens and WASH facilities. They should also be winterised however to different degrees in so much as shelters used as living and sleep areas must not be leak or be damp, whereas separate kitchens and WASH facilities may not need to meet the same standards for waterproofing.

Winterisation of prefab caravans can include:

- Replacement of badly damaged walls or roofs
- Use of additional rigid plastic / metal sheets or sandwich panel such on roofs susceptible to minor leakage
- Any use of screws or nails should be sealed using silicon
- If rigid sheeting is not available tarpaulin and rope can be used however accompanied with monitoring of leak and damp.
- Bathrooms and kitchens can be sealed by tarpaulin
- Expandable foam used to fill gaps ensuring it will not cause pooling of water or interrupt run off
- Additional boards can be used to screw in warped wall panels
- Drainage should be considered for all structures, especially pooling of water under prefabs.

8.4. Winter NFIs

During winter, the following should be considered for general household support²:

- Protection from cold e.g. warm clothing
- Insulation from ground e.g. carpets
- Heating and cooking e.g. stove and fuel

The Shelter Cluster is recommending the following for winter top-up kits*:

Item	Note	Cost per Unit (\$) **	Total (\$)
Kerosene Heater x1	Essential 2 winter NFI items	60	Winter essential \$63
Kerosene Jerry Can x1		3	
Thermal Roll Mat x6***	Additional recommended winter items	12	Winter recommended \$520
Carpet x2		16	
Mat x1		14	
Winter Clothing x6***		67	

* This guidance needs to take the respective to date kerosene policy paper and NFI Technical Guidance of the Shelter Cluster into consideration.

** Average cost as estimated based on partners' feedback in 2018 which does not include warehousing, transportation and distribution costs.

*** Items for individual use such as blankets, mattresses, thermal roll mats and clothing kits should be distributed as per number of individuals in a household.

²<https://www.sheltercluster.org/sites/default/files/docs/Selecting%20NFIs%20for%20Shelter%202009.pdf>

Acknowledgement: IASC Emergency Shelter Cluster

9. Summer Assistance

For those living in poorly insulated tents and substandard shelters, the extremes of season are amplified. The Shelter and NFI Cluster presents nine possible interventions to provide relief from the summer temperatures and the direct sun. A cost comparison is provided for each along with key considerations.

Broadly, there are two categories:

Passive Cooling – heat gain and dissipation control through design and build.

Mechanical Cooling – heat gain and dissipation control through mechanical methods using power and commonly water.

For maximum sustainability and to reach as many vulnerable people as possible with the financial and logistical resources available, the Cluster recommends communal based solutions using passive cooling techniques.

In the event that mechanical means are chosen, partners should carefully consider the following:

Power

- Is there sufficient power available?
- Is it available during the hottest times of the day?
- What is the strategy for when there is no power?
- Can you provide the extra fuel or additional generators?

Water

- Is there sufficient water available?
- Can you provide the extra water? (e.g. tanker of 10,000 liters per 100 AWC)
- Is the water quality (turbidity) suitable? It is recommended to use potable water for all situations, especially in camps, however if this is not possible how is it clearly separated from potable water?

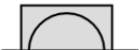
Sustainability

- Provision to new arrivals
- Whether departing families can take all items with them

Partners should discuss the extra power and water consumption with the community, camp management, CCCM and WASH Clusters.

IT IS THE RESPONSIBILITY OF THE PROVIDER OF THE MECHANICAL COOLING TO ENSURE THERE IS SUFFICIENT POWER AND WATER AND THAT THE INTERVENTION IS SUSTAINABLE

9.1. Types of intervention

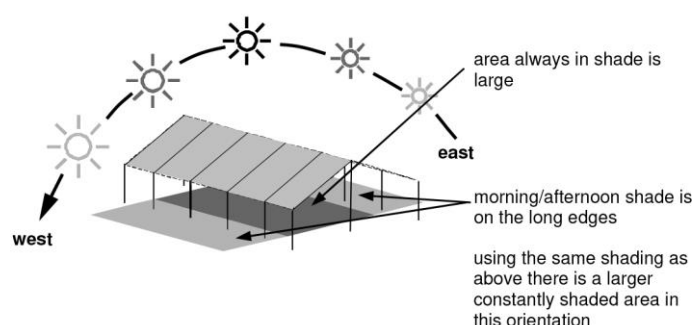
Icon	Type	Cost Comparison	Description
	Household Shade		- Shading kits distributed at HH level - HH led initiative but with technical support if needed - Fire breaks and emergency access routes should be maintained
	Tent Shade		- Fixed shade over whole tent - Can be constructed in rows, steel columns, concrete foundation - Shade netting is lighter and less affected by high wind
	Community Shade		- Shade provided in available space per block or unit of tents - Multi-purpose use - Depending on cultural acceptability and areas divided by gender.
	Summer NFIs		- Jerry cans for additional water to be stored - Cool boxes without power requirements for hygienic food storage - Ice available in most locations including camps through private sector
	Clothing		- IASC 2008 NFI Guidance recommends clothes as priority in hot, dry conditions - Mobile market / fairs / cash preferred modality - Assume \$25 per person
\$	Cash / Vouchers	N/a	- Provided against a 'basket' of summer items – cool box, jerry cans, shading, clothing etc. - Dependent on access to market
	Community Shading with Mechanical Cooling		- Provided at schools, clinics, safe spaces etc. - Mechanical cooling by traditional AC, AWCs, misting fans or mechanical fans - Only if power / water available
	Air Water Coolers, fans etc.		- Requiring power, water and maintenance - High cost option - Dependent on power – often only available during the night
	Reflective Insulation on Roof		- Less needed for IFRC / UNHCR tents, better for MoMD as they lack isolation layer - Winter insulation or space blanket material can be used

9.2. Shading

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 Iraq, shade is required to protect from UV radiation, prevent dehydration, and overheating. Shading can also protect structures such as water tanks by reducing evaporation, stores, equipment and vehicles. 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. The latter seems to be the preference in Iraq.

The use of shading material for fencing supports security and privacy. It can also be used to construct windbreaks, aid circulation routes and cover waiting areas, such as around health centres and distribution areas.



Although customized solutions for each situation would have the highest impact while minimizing resources involved, below are suggested minimum household and communal shading kits. Additional materials, such as those to provide minimal foundations may be necessary.

HOUSEHOLD SHADING KIT							
#	Item description	Unit	No.	Unit cost / \$ *	Cost / \$	Specifications description	Notes
1	Shading material	m ²	4.5	\$1.5 /m ²	\$7	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.
2	Timber lengths	piece	4	\$4	\$16	3m long. Section size 20mm x 40 mm nominal	
3	Nails	kg	1	\$2	\$2	Steel. Supplied in a sealed bag. Length: 75mm (3"); Diameter: 3 mm	
	Total cost				\$25		

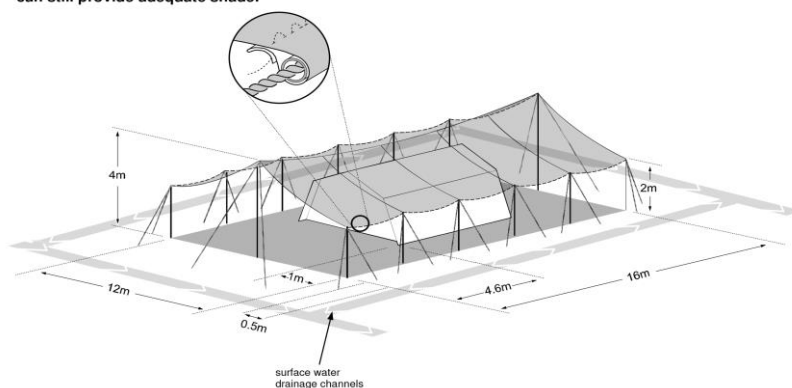
* Average cost as estimated based on partners' feedback in 2018. It does not include warehousing, transportation and installation costs.



Photos: Courtesy of NRC Iraq

a fully constructed shade net for a 41m² tent

note: this is an illustration of an ideal shade net. Solutions that do not look like this can still provide adequate shade.



Photos: Courtesy of AAF/IOM



Photos: Courtesy of AAF/NRC

Figure 1 Uses of shading materials

COMMUNITY SHADING KIT (for a shaded cover of 41m ²) ³							
#	Item description	Unit	No.	Unit cost / \$ *	Cost / \$	Specifications description	Notes
1	Shading material	m ²	150	\$1.5 /m ²	\$225	Sunshade net or shelter grade tarpaulin: 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 lengths	piece	12	\$4	\$48	2.3m long. Section size 100mm x 100mm nominal	Select either 2a or 2b
2b	Timber poles	piece	12	\$6	\$72	2.3m long. Section size 100mm diameter nominal	Select either 2a or 2b
3	Ridge poles	piece	2	\$20	\$40	5m long; 150mm wide	
4	Rope	roll	1	\$30	\$30	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	\$0.50	\$14	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	\$0.5	\$3	6mm; for stitching	
7	Nails	kg	1	\$2	\$2	Steel. Supplied in a sealed bag. Length: 75mm (3"); Diameter: 3 mm	
8	Toolkit	kit	-	-	\$90	(Example contents) Handsaw, shovel, wheelbarrow, claw hammer, pickaxe etc.	
	Total cost				\$ 524		

* Average cost as estimated based on partners' feedback in 2017. It does not include warehousing, transportation and installation costs.

The table above gives an example of the materials needed for the construction of a community shade structure for health clinics, 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.

³ From *Shade Nets: Use, deployment and procurement of shade net in humanitarian relief environments*, MSF & Shelter Centre, 2006, pp. 18-21

9.3. Fixing shading material

The guide produced by ICRC & Oxfam⁴ 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:

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.

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

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.

⁴ [Plastic Sheetting: A guide to the specification and use of plastic sheeting in humanitarian relief, ICRC & Oxfam, 2007](#)

9.4. Evaporative fans / air water coolers

Although these may be an effective solution for summer cooling in the dry climate of Iraq, the restricted funding environment and supply limitations of both water and electricity in many locations limits their use.

For camps and collective facilities, the cluster recommends provision of evaporative fans / air water coolers for communal facilities and at household level only where the increased demand for water and electricity can be met. Mechanical coolers must be complemented with passive cooling techniques such as communal shading to increase effectiveness.

If partners plan to distribute mechanical cooling they must take full responsibility for supporting it during the entire season, including any increases in water consumption or electrical hours.

For out of camp, due to restricted funding and inconsistent supply of electricity, the Cluster also does not recommend distributing fans or evaporative water coolers to individual households.

9.5. Fans

Due to restricted funding and inconsistent supply of electricity, the Shelter Cluster does not recommend distributing fans to individual households in camps or out of camps. Rechargeable fans may be distributed.

9.6. Mosquito nets / fly mesh

In many areas of Iraq summers are too hot and dry for mosquitoes. However, some areas experience higher humidity, stagnant water and poor environmental conditions which are breeding sites for flies. As such, mosquito nets or insect meshes may be considered in summer seasonal assistance, in coordination with Health actors.

9.7. Summer NFIs

During summer, the following should be considered for general household support:

- Means of storing additional water
- Means of cooling drinks and storing food
- Protection from sun, e.g. loose fitting clothes and shading
- Covering of the ground by flooring, tarpaulin or mats

The Shelter Cluster is recommending the following for summer kits*:

Item	Note	Cost per Unit (\$) **	Total cost (\$)
Cool Box x1	Essential 2 seasonal NFI items	25	Summer essential \$27
Extra Water Jerrycan x1		2	
Shading Kit x1	Additional item NOT NFI listed	60	Summer recommended \$245
Summer Clothing x6***	Additional seasonal items as required	25	
Rechargeable fan x1		35	

* This guidance needs to take the respective to date kerosene policy paper and NFI Technical Guidance of the Shelter Cluster into consideration.

** Average cost as estimated based on partners' feedback in 2018. It does not include warehousing, transportation and distribution costs

*** Items for individual use such as blankets, mattresses, thermal roll mats and clothing kits should be distributed as per number of individuals in a household.

10. Using Cash as a Modality of Assistance

The Shelter and NFI Cluster and the Cash Working Group (CWG) recommend the adoption of cash-based interventions, where they will improve Shelter and NFI outcomes, to meet the seasonal needs of affected vulnerable populations.

Currently, the CWG provides Multi-Purpose Cash Assistance (MPCA) to highly vulnerable families to meet critical basic needs in the form of one-off emergency cash transfers, and an additional two transfers for the most vulnerable households. Transfer values are based on an agreed survival minimum expenditure basket that includes costs for rent and other basic needs. Partners are encouraged to work closely with the CWG to ensure Shelter and NFI cash interventions are complementary with multi-purpose cash and other sector-specific cash projects being implemented in Iraq. The CWG is available to provide technical assistance in the design and operationalisation of shelter and NFI cash interventions as required.

Seasonal assistance can be delivered as cash in the following ways:

Option One: Unrestricted Seasonal Assistance

Seasonal assistance is provided as an unconditional cash transfer to vulnerable households and can be delivered in addition to MPCA. When delivered in combination with MPCA, unconditional seasonal assistance ensure households have sufficient protection from extreme temperatures while limiting the risk that cash intended for seasonal support is spent on unmet basic needs. When not combined with MPCA cash transfer should be carefully timed to promote expenditure on seasonal assistance. Messaging around the use of cash for items specifically related to seasonal assistance should be provided to households along with recommendations on items to be considered.

The following are total costs for essential and recommended seasonal items:

Kit	Cost per family (\$)	Delivery timeframe
Summer essential	27	June – Sept
Summer recommended	245	
Summer total	272	
Winter essential	63	Nov - Feb
Winter recommended	520	
Winter total	583	

If cash values beyond essential levels are provided in some cases i.e. protracted need, families will not require all items. Therefore it is recommended to provide half the value of the recommended items, plus the essential items. For summer this is \$147, rounded to \$150, and for winter this is \$320.

Please note these figures do not take in account other seasonal items such as air water coolers, tent insulation or other similar items which are frequently provided in kind, especially in camps. Dependent upon need, winter cash assistance could be viewed in more holistic terms and the basket value designed to include shelter repairs and/or any other winter related needs of beneficiaries increasing beyond the above, or as the essential items plus support for shelter improvements and/or any other winter related needs of beneficiaries.

When providing cash interventions many factors should be considered, with specific reference to equity, and further details provided are provided in the *Global Shelter Cluster Position Paper – Cash & Markets in the Shelter Sector* as well as through the Iraq cluster and CWG.

Option Two: Restricted Seasonal Voucher

Vulnerable households are provided with vouchers redeemable only for a restricted list of seasonal shelter and NFI items at selected vendors. Where possible, it is preferable to establish a large network of local traders that are easy and safe to access, particularly for conflict-affected families and vulnerable groups such as the elderly and disabled. In cases where this is not possible, a voucher fair is a practical alternative and has already been proven successful in Iraq. A voucher fair imitates a market by bringing traders to an organised space where they display products and beneficiaries use vouchers to purchase the goods they need. Partners should consider the cost of transportation to/from voucher distribution points, local markets and voucher fairs when designing their programmes. For the most vulnerable in-kind distribution or unconditional cash may continue to be the most adequate options. Partners are encouraged to work closely with the CWG to ensure restricted voucher projects are aligned with other cash-based interventions. Voucher transfer value should be aligned with cash values.