

SHELTER



KEY MESSAGES

- ▶ Shelter is more than a roof: it is a means of ensuring the health, security, privacy and dignity of camp residents.
- ▶ To ensure an integrated approach, shelter programmes in camps and camp-like settings must be closely linked to other interventions. These include water, sanitation and hygiene (WASH), health, livelihoods, protection and basic camp infrastructure.
- ▶ Shelter needs and use change over time, and people need support to maintain, upgrade and re-use their shelters. Materials and designs should be durable and flexible enough to permit user adaptation.
- ▶ Resources and capacities need to be assessed prior to building by consulting and observing what building materials are available and used locally for shelter, and how rapid and safe construction can best be supported using local expertise. Issues of environmental sustainability should be considered.
- ▶ It is important to incorporate risk management measures into shelter programmes by reducing the threats of public health outbreaks, violence, theft and damage from fire, flooding and high winds. The aim is to avoid increasing the vulnerability of displaced families.
- ▶ The need for strong technical support during all programme stages should not be underestimated. The Camp Management Agency and shelter providers need to make sure that sufficient staff are available for technical supervision of shelter construction and monitoring of usage and occupancy.

INTRODUCTION

Shelter is required by people for health, security and dignity. A shelter is more than just protection from weather conditions for it provides a space to live, store belongings and maintain privacy. Good shelter programmes enable a family to have access to work opportunities and promote a sense of security while living in a temporary community.

! A shelter is a “habitable covered living space, providing a secure, healthy, living environment with privacy and dignity to the groups, families and individuals residing within it.”

Tom Corsellis and Antonella Vitale, *Transitional Settlement Displaced Populations*, p.411

At the start of operations, all options for sheltering displaced families should be investigated. If taking over or upgrading an existing camp, shelter providers and the Camp Management Agency should take time to assess what has already been built by the inhabitants of the camp/settlement. Remember that the physical components of a shelter programme include not only walls and a roof but also clothing, bedding and cooking sets – collectively known as non-food items (NFIs).

▶▶ *For more information on NFIs, see chapter 13.*

In other settings or at the beginning of emergency operations, it may be more appropriate to consider repairing existing buildings, renting unoccupied structures or having the displaced stay with host families. Each option will have clear advantages and disadvantages to the operation. Sound planning for a shelter project entails simultaneously meeting the needs of displaced families and the impact on host communities. Compensation for the adverse effects on neighbours or host communities may be needed.

Shelter in Collective Centres – Voice from the Field

‘Immediately after the main displacement of the population in Georgia in 1993, some IDPs found refuge in tents, but the majority was hosted by friends or families and in public buildings. A wide variety of buildings have been used as collective centres including; hotels, workers’ barracks, kindergartens, sports complexes, factories, schools and hospitals. Across Georgia there are many disused or abandoned buildings after years of industrial decay and many of the buildings were disused before IDPs spontaneously settled in them.’

Integrating the needs of individual family dwellings will determine the scale and pattern of the camp site. Defining the community’s shelter needs can be done through focus group discussions and dialogue with the camp and host communities to settle upon appropriate shelter designs and features. Site planning and shelter designs also need to take into consideration the delivery and maintenance of other camp services, such as food and NFI distribution, other camp infrastructure and external logistics supplies. Overall, it is important to have a clear site plan before building shelters or distributing materials. Site planning considerations need to be understood in relation to shelter and how people will live in the camp.

 The way land has been negotiated and the early relationships that have been developed between the camp population and the host community will also have an impact on the running and management of a camp.

▶▶ *For more information on camp set up and closure, see chapter 7.*

Frequently a displaced population will settle themselves in rudimentary or self-settled camps, prior to the arrival of humanitarian organisations. Depending on the size of each self-settled camp, the focus may be on upgrading existing structures, moving them in order to restructure the camp, or implementing safety measures to protect existing infrastructure – rather than building new shelter. If the Camp Management Agency does not have sufficient technical

capacities, these tasks need to be carried out and supervised by a specialised shelter service provider.

Optimally, settlements or camp sites are selected and designed prior to the arrival of displaced persons and based on international technical standards which provide a framework for agencies to set work plans that reach accepted levels of services. In unstable or extreme situations it may be difficult to reach these at the beginning of operations. Attaining optimal standards may be a process that develops over time. The Camp Management Toolkit recommends the use of minimum standards and in this chapter outlines some of those used by Sphere and UNHCR. Although minimum standards are meant to be universal, whether they can be delivered will depend much on local and cultural factors.

! Use health, protection, environmental and livelihoods standards and indicators to monitor shelter programmes!

KEY ISSUES

Depending on situation and context, construction and maintenance of camp shelter may either fall under the responsibility of the Camp Management Agency or may be planned and implemented by a specialised shelter service provider. If the latter, the Camp Management Agency has to fulfil one of its core tasks and monitor the overall quality and effectiveness of shelter programmes in the camp, always considering cross-cutting relationships between water, sanitation and hygiene (WASH), safety, security and participation. When monitoring shelter programmes in camps and camp-like settings, particular attention must be paid to the proper implementation of coordination structures and adherence to standards.

►► *For more information on the roles and responsibilities of a Camp Management Agency see chapter 2*

PLANNING FOR SHELTER INTERVENTIONS

Shelter programmes in the camp context, can roughly be organised into the following categories:

- preparedness/contingency
- emergency shelter
- care, maintenance and upgrade of shelter
- camp closure and durable shelters.

Preparedness/Contingency

When planning or preparing for scenarios of further population influxes into the camp (including those due to natural increases in the camp population as a result of births), the Camp Management Agency should develop a “ladder of options” that will allow increase or decreases in shelter provision depending on how many new arrivals are received. Planning in this manner will ensure that adequate reserves of appropriate shelter materials are available when required. Remember that it is important to consider exit strategies at this stage as well.

Emergency/Transitional Shelter

As the Emergency Shelter Cluster’s *Key Things to Know* guidance points out, any shelter provision has the goals of “survival, security and safety, human dignity and sustainability of social life”. Emergency shelter support must be designed for rapid implementation. However, camps often last for many years and emergency shelter programmes should be followed by programmes that support occupants in achieving stronger and more lasting shelter.

The term “transitional shelter” is commonly used in shelter programmes to imply that the shelter is moveable, adaptable and expandable. Materials such as plastic sheeting, tents, or sticks/bamboo may, if appropriate, be re-used at a later stage in the transition to a more long-lasting – and ideally durable – dwelling. However “transitional shelter” programmes imply that there is a vision of what and where the durable shelter solutions will be. This is often not the case in camps.

▶▶ *See examples of emergency and transitional shelters in the box below.*

If managing a camp where only emergency shelters (or tents) are being used, the Camp Management Agency should:

- encourage shelter organisations and providers to bring in programmes that provide materials and training that will support durable shelter once a permanent settlement location has been identified
- be aware that the camps may be rehabilitated or restored to their original state once people leave: thus, materials and construction methods need to be chosen appropriately.

►► *For more information on environmental rehabilitation see chapter 6.*

- consider that the shelter design selected will depend upon many issues such as:
 - what people can build
 - what materials are available
 - the anticipated length of displacement
 - what type of buildings the host population live in.

! Distributions of shelter NFIs, such as plastic sheeting and fixings will depend on the context and the quality of the materials. Distributions will have to be repeated every one or two years if the population is not permitted or able to upgrade their shelters.

▲ Examples of Emergency and Transitional Shelters:

1. Darfur, Sudan: Plastic sheeting was distributed as an emergency measure to cover shelters built of mud bricks or grass by the displaced themselves. This was accompanied with fixings, structural materials (such as sticks and bamboo to prevent uncontrolled environmental damage), and training. Labour was provided for construction of shelters for those with specific needs and vulnerable individuals.

2. Pakistan: Tents were distributed with blankets, stoves and cooking sets. A few months after the earthquake training was given on the correct set-up of tents and mobile teams were formed to help with tent set-up.



People were able to relocate tents to the sites of their destroyed houses during the reconstruction phase.

3. Georgia: A school and blocks of flats were repaired to host displaced families.

4. Uganda: Usually displaced families themselves built and thatched traditional shelters. Plastic sheeting was distributed to those returning home during the rainy season or when grass was too low to cut or when they had lost their camp shelter due to fire. Persons with specific needs were supported with special programmes to assist with shelter construction.

5. Burundi: Durable shelters – to designs of the local host community – were built, maintained and funded by UNHCR and a specialised agency. Work and income opportunities were created for refugees and the host community.

Size of Shelters

Living in a camp is a challenge. The noise and associated lack of privacy caused by living in such close proximity to each other can be very stressful for all members of a family. These stresses can be partly offset by ensuring that shelters have sufficient space for sleeping and dressing, care of infants or ill people, the storage of food, water and possessions and a communal family gathering space. Each shelter should have additional space for eating and washing. In longer-term camps, many families may want extra space for home-based enterprises or to store tools and supplies.


Sphere shelter and management standard 3 specifies that people should have sufficient covered space to provide dignified accommodation, undertake essential household activities and support livelihoods. However, it may not be possible to meet these guidelines in all situations. Camp Management Agencies need to be pragmatically aware of social dynamics and be prepared to make exceptions:

- Shelter programmes and non-food items distributions are often conducted on a family basis. However, family sizes may vary significantly as well as change over time. This can lead to situations where a single individual can have the same size shelter as a family of 12.

- Complications may take place with polygamous relationships where several wives may get registered as ‘belonging’ to the same family. This can lead to significant social and privacy issues if all are forced to live in the same house.
- A marriage or a divorce may mean that families are forced to live in closer proximity than they would wish. In the case of a divorce the women and children are the most likely to be made homeless.

 Note that the standard size of a tent is 16m² – only large enough for three people.

Although, both UNHCR and Sphere advocate for “people [to] have sufficient covered living space to provide dignified accommodation, [where] essential household activities can be satisfactorily undertaken and livelihood support activities can be pursued as required,” these indicators are largely dependant upon climate and other services that are available for camp populations. The Sphere indicator for shelter is 3.5m² covered area/person. UNHCR (2007) suggests a range from 3.5m² to 5.5m². Sphere further notes that if this target cannot be attained, or is greater than the typical space used by the affected population, then considerations should be given to the impact on dignity, health and privacy of a reduced covered area.

 In Sierra Leone some “marriages of convenience” took place so that people could qualify as a new household and receive larger family-size shelters. This led to protection issues where women were forced into marriage.

Division of Internal Space

Within individual shelters, internal subdivision should be provided for different family members particularly where men, women and/or children traditionally sleep in different rooms. Note that in some contexts it is common for extended families to combine and share shelters allowing men and women to sleep in separate shelters.

In mass shelters partitioning should encourage the grouping of families, and internal layout should promote division of household and personal space.

Camp Closure

At the time of camp closure, ownership of shelter materials will usually remain with those who lived in the shelters. However, there are circumstances where a Camp Management Agency may wish to retain materials or keep dwellings intact so that they can upgrade remaining camps in the area – as was the case for post-tsunami camps in Batticaloa, Sri Lanka – or may decide to move other displaced families into the already-constructed houses.

Camp Management Agencies should resolve issues of who owns the shelters themselves before camps close. This will be more of an issue with long-lasting shelters, such as those made of mud that cannot be moved. Often durable constructions are handed over to the host community, although the default owner is usually the landowner. Ideally these issues should have been resolved before shelter construction begins. Ownership must be agreed well in advance of camp closure.

Arrangements should be made for:

- onwards transport of shelter materials to permanent settlement locations: this will often require vehicles to be provided as housing materials are bulky. Mud bricks, steel or timber-framed shelters are significantly heavier. Groups with specific needs and more vulnerable groups will need support to disassemble, carry and reassemble housing materials
- disposal of abandoned shelter materials: burning, burial and decommissioning are all options. Cleaning and environmental rehabilitation of the site will be harder to do if concrete and other durable shelter materials have been used in construction.

▶▶ *For further guidance on environmental rehabilitation see chapter 6.*

TYPES OF SHELTER PROGRAMMES

Whichever type of shelter programme is implemented in the camp, the task of getting the right materials and people to support implementation will be essential.

Different types of shelter programme are listed below. They may need to be combined when materials are not locally available.

- NFI distribution is one of the most common forms of emergency shelter intervention. Tool kits may be included in distributions to help people to build safer structures. Note that cooking sets are often included as shelter

items. Care with specification and procurement is important in order to ensure durable quality of materials.

- Vouchers can be used instead of delivering NFIs, allowing camp residents to redeem vouchers with designated traders. This can help people to receive what they actually need to construct their dwellings. However, schemes depend on the capacity of traders and can create a secondary currency. Vouchers are more commonly used with dispersed settlements or people on their own land, rather than for those in camps.
- Cash distributions can be used instead of distributing materials. Cash is given so that people can buy what they need. As with vouchers, cash is more common as a shelter intervention with dispersed populations, rather than for those in formal or urban camps.

►► *For further information on cash-based responses in emergencies, see the Reading and References section.*

- Training programmes can be offered in conjunction with constructing the temporary house. In addition to construction techniques they can include fire and flooding risks and tent erection.

! It is common at the beginning of an emergency to upgrade existing buildings like those used in reception and transit camps. These may only be necessary for families awaiting the construction of a planned camp-site or as part of a camp closure/return operation.

In contrast, collective centres which offer mass shelter in unoccupied public buildings such as schools, kindergartens, hotels or factory buildings are usually meant as temporary or transit shelter. These topics are not covered specifically in the Camp Management Toolkit. However many of the same management issues can be applied to these settings.

METHODS OF IMPLEMENTATION

Efficient on-site shelter monitoring is challenging and requires qualified technical staff for supervision. The methods that are selected in organising and managing shelter programmes should involve the displaced communities through focus

groups and camp shelter committees. The policies and methods of implementing a shelter programme in camps will depend a lot on the nature of displacement, local context, availability of building materials, cultural ways of building, availability of qualified staff and skills within the displaced and host community. The Camp Management Agency should be aware of some options to implement shelter programmes including:

- Direct building is where the organisation responsible for shelter manages the construction process, employing and supervising the labour. It will require significant amounts of staff management time and qualified supervisors who oversee as the shelters progress. These types of programmes can lead to a lack of ‘ownership’ for camp residents because they put the focus of accountability for construction on the implementing organisation.
- Contracting – when the organisation responsible for shelter employs a contractor or partner organisation to build the shelters. It requires skilled staff to monitor the construction and sign off at pre-agreed construction milestones (i.e. foundation, lintel and roof). It can also lead to a lack of ‘ownership’ for camp residents.

▶▶ *See note on using and managing technical experts below.*

- Self-built or community-led is where community members build their own shelters. This may either be unpaid or paid (in cash or food) depending upon capacities and complexity of shelter. This technique can be particularly effective for simple and traditional shelter designs, with communities who are accustomed to constructing their own shelters but is not suitable for complex structures (such as those made from reinforced concrete) that only a few community members in the building trade would know how to construct. Supervision and support is required and identification and support for vulnerable camp members is critical.

Using and Managing Technical Experts

For certain tasks related to shelter provision experts may be required. If in doubt about a technical issue the Camp Management Agency should seek advice and bring in or contract the services of a suitable specialist. While technical specialists can provide added value, make sure that local knowledge and customs are reflected in all technical decisions. Be



aware of the risk of over-engineering simple shelter structures. Need-less expense and useless suggestions can be avoided if the terms of reference for technical support are clear and community- oriented.

Examples of when technical staff may be required are:

- dealing with risks such as flooding, winds and earthquakes
- physical planning advice in site selection and planning
- during shelter programme set up, implementation and monitoring
- when detailed construction projects or building plans need to be drawn up for more durable shelters, upgrades of existing buildings or major infrastructure buildings. Care must be taken that the local construction industry is capable of building what is designed
- when a 'clerk of works' assists to monitor and oversee construction contracts.

! Corruption is always a problem where expensive commodities are being used. Whether it is small or large scale it should be tackled together with the shelter provider. Some anti-corruption strategies include:

- deterrence – discouraging corrupt behaviour by imposing penalties. Appeal to the existing legal system, internal investigation and dismissal mechanisms
- protection systems and procedures – to minimise opportunities for corruption to develop – these may include logistics and accounting systems, tender procedures, audit functions and monitoring and management procedures
- acceptance – relates to the way humanitarian agencies are perceived by the communities in which they work and includes strategies to command local support for aid interventions through increased information and beneficiary involvement. It is not about the acceptance of corruption, but about how gaining the acceptance and support of the agency prevents corruption.

A combination of these approaches is probably the best way to combat corruption in a camp setting.

CARE, MAINTENANCE AND UPGRADE OF SHELTER

Following an emergency shelter response, stronger and more lasting shelter will be required to last for the duration of displacement. This is especially the case in areas with extreme temperatures, rainfall, snow and/or winds. Shelter built for short-term use usually is expensive to maintain over the longer-term, as well as not fulfilling the full role of shelter in terms of privacy and dignity.

Whenever upgrading shelter, the responsible agencies need to consider the anticipated lifespan of the shelters and the camp and how long both the host population and camp residents anticipate the camp will remain, the actual permanence of the shelters and the camp, as well as the permanence perceived by both the host population and those living in the camp.

Durable shelter and housing are achieved when permanent shelter solutions have been found for affected people. Durable shelters should not usually be constructed in camps which are intended to be used only temporarily, unless a long-term use and ownership is agreed and planned. An example of this is where buildings that are constructed could be handed over to the host population.

! Camps are not durable solutions and permanent shelter should not usually be built in camps. Planning camps is different from planning permanent settlements, and great care should be taken to understand these differences.

Overcrowding and initial poor site planning can make it challenging to maintain and upgrade shelters at a later stage. However, upgrading of poorly constructed shelter is a priority for camp maintenance and may fall directly to the Camp Management Agency to organise.

! Optimally, the camp residents take on the responsibility for maintenance and upgrade of their shelters.

Whether sharing the responsibilities with a shelter provider or implementing shelter maintenance directly, the Camp Management Agency can initiate programmes by:

- assessing baseline conditions, including use of current shelters by inhabitants and the function of current shelters
- ensuring that camp shelter committees survey and report on shelter status and needs
- establishing an efficient assessment and monitoring system for quick response and support
- building maintenance capacities amongst the agency's own staff and the displaced community
- ensuring availability and storage of maintenance equipment, tools and the most frequently needed materials
- resolving disputes over shelter and plot allocation within the displaced communities
- mediating disputes over shelter and plot allocation between the government or host community and the displaced communities
- negotiating in IDP settings with authorities and land-owners as to whether people are allowed to upgrade their shelters and plots: local government authorities may have specific restrictions on IDP settlements
- ensuring that shelter needs for new arrivals are quickly met and vacant plots are prepared and allocated
- identifying (and potentially removing) vacant shelters
- replacing old, damaged or destroyed shelters: it is often simpler to reclaim damaged materials, and this will also avoid shelter inhabitants causing intentional damage in order to get new material
- ensuring clear and transparent rules on when materials will be replaced
- ensuring community participation in maintenance activities and sensitising displaced communities to the importance of shelter maintenance.

RISKS

Risks represent a combination of threats (such as flooding of shelters) with the exposure to that risk (high where there is no drainage). Exposure may be increased by factors such as poor site selection (for example if a site is located in a flood plain).

Termites and Vermin

Techniques to protect shelters against termites and vermin include:

- dipping or painting support poles with old or disused engine oil mixed with diesel: this should be done after wood has been cut, but before construction
- spraying or ‘fogging’ of insecticides: this can be done under the supervision of an experienced organisation in insect control and with coordination between other service providers like WASH and health agencies

▶▶ *For more information on hygiene, drainage and WASH infrastructure, see chapter 14.*

- ensuring that latrines are cleaned and maintained
- restricting the number of insects by maintaining individual shelter drainage ditches
- tackling scabies infestations by burning and replacing all bedding materials in the camp – with advice from those providing health services
- collecting waste from houses and communities grouped together in the camp.

It is important to maintain and update shelter data (house registration and numbering; distributions; repairs; cost estimates for upgrades and other planning data) that can be shared with others. This information can be cross-referenced in the event of a health outbreak or to treat specific problems associated with pests that may develop in certain sections of the camp.

Rain/Flooding

The best way to avoid risk of flooding is through good site selection and planning

▶▶ *For further information on camp planning, see chapter 7*

Often shelters are not waterproofed prior to the rainy season. As much as possible, organise plastic sheeting distributions in the months before the rains are due. Additionally, much flooding prevention is connected to maintenance of drainage ditches and irrigation channels. If a site survey prior to the rainy season indicates that shelters fall within flood risk areas, it may be necessary to move them. If there is no other option elevated platforms should be considered.

! Practical advice for a Camp Management Agency in preparedness for flooding:

- maintain a stock of tools (shovels and pick axes) for emergency earthworks that can either be loaned to camp residents on a daily basis or through the residents' camp maintenance committee
- explain to each family that they should dig their own shelter drainage in advance of the rains: this can be linked to care and maintenance programmes or organised by a WASH agency
- ensure that individual shelter drainage ditches connect to a site drainage system and do not flood the shelters of neighbours
- provide physical support, or encourage the community to provide support, to dig drainage – or raise floors – for vulnerable individuals
- identify areas of the camp, prior to rainy seasons, that are prone to flood and seek engineering support to re-engineer the land for improved drainage or to advise on relocation due to flood risk
- visually check the camp for shelters that are likely to leak
- prepare materials such as plastic sheeting and fixings or tarred tape to repair roofs
- provide gravel for drainage ditches – noting that in areas with very high rainfall – cement drainage may be required
- during site planning use low areas for play and other less essential areas: work on a 'triage' principle for facilities when planning in flood areas – the least important areas can be allowed to flood first.

Fire

Fire can be a significant cause of injury, death and loss of property in a camp setting. Plans must be in place to ensure prevention and preparedness. As much as possible, these plans must be shared with the camp population so that people know what to do in case of fire. Existing committees can be formed or appointed to be responsible for fire prevention, preparedness and fire response.

! Advice for Camp Management Agencies on dealing with fire risk:

PREVENTION

1. sites should have regular firebreaks
2. shelters should ideally be spaced at a minimum of twice their height apart
3. prohibit open fires or bare flames inside shelters unless in a well-contained area – please note that national policies on this may vary
4. regulate when cooking fires are allowed in dry seasons
5. ensure candles – if allowed in the camp – are placed in lamps or in jars
6. remind camp residents to never leave a candle lit while sleeping or when they leave the shelter
7. provide sensitisation training on the risks associated with smoking inside or near shelters
8. ensure stoves do not touch or adjoin flammable walls
9. ensure chimneys project through a solid wall or through a fire-proof plate
10. ensure electric light bulbs are at least 20 cm from tent canvas or other flammable materials
11. regularly inspect electrical wiring.

PREPAREDNESS

1. provide fire stations with buckets (with small holes to reduce risk of theft); sand, fire beaters and fire extinguishers
2. note that spraying water will only cause kerosene fires to spread
3. provide a firebell to alert other camp residents to large fire outbreaks
4. set up community fire committees to train camp residents on preventing and dealing with fires
5. enforce fire breaks and keep them free of debris, and ensure fire stations are equipped to help deal with fires.



IN CASE OF FIRE


1. check that there is no-one inside the shelter/tent and only then knock it down to help prevent the fire from spreading
2. remember to teach camp residents the “stop, drop and roll technique” – if your clothes are on fire, stop where you are, drop to the ground and roll to extinguish the flames.

IF YOU DO GET BURN CASUALTIES

1. cool the affected area with cold water or a wet towel immediately
2. protect the burn with a clean cloth
3. seek medical help as soon as possible
4. keep burn victims warm.

UNHCR 2007 Fire Safety Standard

“If space allows, the space between individual buildings should be adequate to prevent collapsing, burning buildings from touching adjacent buildings. The distance between structures should therefore be a minimum of twice the overall height of any structure. “If building materials are highly flammable (straw, thatch etc.)” the distance should be increased to 3–4 times the overall height. The direction of the prevailing wind should also be a consideration.”

 Family shelters in highly congested IDP camps in Northern Uganda adapted to fire risks in a very innovative way, by only slightly connecting the thatched roof with the hut’s round wall. When a fire breaks out, IDPs can push the roofing down from the walls, thus creating fire corridors.

Wind/Typhoons

High winds such as those associated with typhoons can destroy shelters.

! Practical advice for a Camp Management Agency's in preparedness for strong winds:

1. conduct a structural assessment of shelter in camps: if there are no qualified staff, bring in engineering support for the assessment
2. act on the outcomes of the assessment, and if time allows, modify shelter designs, ensuring that any upgrades will not make the hazards worse
3. ensure loose materials – especially corrugated iron/tin sheeting – are secured, for they can be lethal in high winds
4. consider distributing additional rope, roofing nails and other fixings before winds are due
5. bring in engineers to check common failure points – poor connections between roofs and walls, lack of diagonal bracing and poor foundations
6. attach thatch and roofing materials with rope
7. ensure ropes on tents and other temporary structures are well-secured and tight to prevent structures from flapping in the wind.

Earthquake

If in doubt about the seismic resistance of shelters in a camp, an engineer should be employed to assess the structures and suggest improvements. Where earthquake or aftershock risk is high consider hiring an engineer to assess the safety of existing buildings before using them as collective centres. Generally lightweight and well-braced structures are less likely to cause injury. Wherever possible, steep slopes should be avoided as they are prone to landslides. Remember that:

- Where earthquake risk is high, people should be encouraged to store heavy objects and jars nearer the ground where they cannot fall on people's heads.
- When an earthquake occurs people need to be trained not to immediately run outside buildings as slates and glass might fall from above.

Cold Climates/Winterisation

Even in desert environments which may also be hot during the day, the climate can be quite cold at night. Cold seasons are associated with a rise in fire injuries, respiratory infections, and eye infections – due to increased indoor cooking. In most camps, fuel is seldom available in sufficient volume for heating even in the coldest of climates, which is why people may do their cooking before sunrise when temperatures are lowest.

Priorities to watch for in cold weather are to keep:

- space next to the skin warm and dry (clothing, bedding, blankets, mattresses and a roof)
- living environment warm and reduce wind chill by reducing drafts with low walls.

! To support camp residents in cold climates, the Camp Management Agency can:

- negotiate with land owners/government for low height walls to be built from mud to reduce low level draughts
- ensure with organisations responsible for water supply that sufficient water is available for basic mud construction of low walls, and if necessary loan basic tools to camp residents
- ensure that families have sufficient plastic sheeting, blankets or other materials to block draughts: this is essential to improve ambient air temperatures and thermal comfort especially where limited fuel is available for heating. (Conversely, reduced air flow can lead to a spread of respiratory infections such as TB). Extremely high ventilation rates – in excess of six air changes per hour – are required to reduce transmission rates of respiratory diseases, and are not practicable without allocating major fuel resources for heating
- work with the WASH agency on winterisation of water supply and access roads
- ensure that camp residents have access to sufficient food supplies as they require more calories in cold weather. (See Sphere Standards on advice when the ambient temperature is below 20°C) It is useful to get technical support from a nutritionist if in doubt.



- consider construction of solid low level walls around the shelter to prevent cold draughts at floor height, and build small walls to shield doors
- consider constructing communal heated areas – potentially separating men and women.

Snowy Weather

Snow can cause shelters to collapse; displaced persons (via the camp shelter committee if it exists) need to be prepared for heavy snow falls prior to onset of winter:

! What the Camp Management Agency can do to prepare for snow falls in tented camps:

- form a team in preparation for snow fall – either through staff members or through the shelter committees
- send the team around camps to ensure shelters are correctly braced/erected/tighten guy ropes (on tents and ensure the canvas is taut)
- the team should explain to families to brush snow from shelters regularly as it falls – even if it is at night
- prepare emergency shelters in case of collapse
- ensure drainage is in place to prevent flooding from snow melt
- consider distributing additional rope or fixings to secure structures or plastic sheeting to keep structures dry and help snow to slide off
- be prepared that tents or shelter may collapse onto fires so ensure there are no open fires in tents/shelters and that stoves are under protected roofs which will not fall.

▶▶ *See fire safety precautions above.*

Hot Climates

In hot climates shade and ventilation are essential. Use of materials such as thatch, banana leaves or reflective paint on roofs of shelters should be encour-

aged. However, the environmental impacts of camp residents harvesting materials to cover their roofs need to be considered. Shade nets can also provide a well-ventilated solution that is preferable to plastic sheeting.

In any case, the Camp Management Agency should:

- encourage the shelter provider to think of appropriate shelter design measures such as improved shelter ventilation, shaded external areas, awnings or taller ceilings
- support camp residents to build awnings and make other improvements
- consider encouraging plantation of foliage around shelters.

INFRASTRUCTURE SERVICES

Numbering Shelters

Numbering shelters helps to:

- clarify who is registered as being in the camp
- identify families
- trace camp residents, especially if residents are linked to the number of the house in which they live. Data can be held in a secure spreadsheet or even a GIS system

Individual houses should be numbered in a logical order in accordance with the site plan to identify individual shelters as well as the block that they come from. Permanent paint on shelters for numbers and letters or symbols can be used to identify blocks. Painters and involved workers however would need to have protective clothing to prevent ruining their own clothes.

▶▶ *For more information on numbering shelters see Chapter 7*

! There may be some issues with the colour of paint used – in El Geneina, West Darfur, camp managers learned that red was traditionally used by factions opposed to those in some of the camps.

Electricity/Lighting

Electricity supply is often too expensive to maintain and install and may make the camps more permanent than is desirable or desired. However there are many circumstances where it has been provided. Electrical power is more commonly used for lighting as it uses less power than heating and so requires less infrastructure investment. Usually it is the responsibility of the government or official electricity board to install and maintain.

People may tap into the electricity supply. This has cost implications for the supplier, but more critically can lead to safety issues. Thus, the responsible agency needs to:

- ensure that a professional electrician has checked the wiring to reduce risk of electrical shocks and or fire
- check domestic wiring arrangements and ensure that bulbs are not too close to flammable materials such as thatch roofs
- monitor if any families in the camp have acquired their own generator/electricity source. If necessary awareness campaigns on safe usage – such as safe storage and refilling of fuel and venting of exhaust gases – would need to be carried out.

Household Energy

The need for fuelwood around camps often leads to significant protection issues in searching for wood; health issues due to indoor smoke and environmental issues due to the impact of fuel wood collection.

There is rarely a single solution to household energy needs and a programme is usually required as part of camp management that combines support for; building stoves with flues, using suitable pots with lids, collecting fuel, drying fuel and sustainably sourcing supplies from the region. Ideally, fuel should be a major consideration in the size of the camp as well as location of the camp during the set-up phase.

Gas

Piped gas is seldom provided to camps although there are examples of collective centres where existing gas supplies are used. Where piped gas is used, professional technicians need to check installations. Gas is more frequently used in canisters for cooking. If cooking fuel is used in a camp canisters must be stored outside of shelters to avoid fumes. Additional security measures may need to be put in place to prevent theft.

BENEFICIARY NEEDS

Often the best means to identify needs and gaps of a camp population is through regular (ideally daily) visits to individual shelters by camp management staff.

Shelter and Vulnerability

Identifying camp residents who have specific needs, and will need particular support in constructing or maintaining their shelter, is critical. The Camp Management Agency must pay particular attention to monitoring these persons' needs and develop specific policies during:

- plot allocation: if possible, persons with specific needs can be linked with traditional support mechanisms. The right positioning of their shelter is important to consider, so that they can get assistance from their neighbours or people from the same area, as well as from the Camp Management Agency and have access to infrastructure and services
- distribution and carrying of shelter materials to plots. Assistance is needed with transportation of materials as shelter items tend to be heavy.
- construction of shelters: building a shelter can be a physically demanding activity
- maintenance of shelters.

! Remember even individuals or groups needing assistance are not helpless per se. Displaced persons may have lost their homes and belongings but have not lost their skills and experience. Take care to support and optimise the coping strategies of all groups – including the “vulnerable”.

►► *For more information on protection of persons with specific needs, see chapter 11.*

Housing Allocation

This needs to be carefully considered where persons with specific needs or groups at risk live in camps. Whenever possible, personal choices should be respected in determining sites for these persons and groups. However, segregation might also increase vulnerabilities through the creation of a “vulnerable ghetto”.

Theft/Security

Practical tips to consider are:

- provide door locks to safeguard possessions and ensure security
- negotiate with land owners/authorities so that people are allowed to build fences around their plots if they wish to do so, and if there is enough space
- create material distribution programmes which encourage flexibility and beneficiary choice on how to assess and deal with security threats. If you do this, be sure to inform donors of your policy and make sure to get their clearance. Are they happy, for example, if beneficiaries take plastic sheeting distributed for 'shelter' but instead use it to protect their livestock?
- encourage families to upgrade and make their shelters more private in ways that are most culturally acceptable to them: even a 1mm thick grass wall can help to make people feel more secure and help to reduce theft.

▶▶ *For more on camp safety and security, see chapter 12.*

CHECKLIST FOR A CAMP MANAGEMENT AGENCY

Demographics

- The size of a typical family is accounted for, including the number of women/girls and men/boys.
- The shelter response per family is decided, taking account of the number of people in each family.
- The number of people without adequate shelter and their whereabouts is known.
- The number of people without a household and their whereabouts is known.
- It is known which families are living together.
- The issue of family and individual privacy is taken into account.
- Programmes are planned which enable people to live in dignity and to provide care and protection to their families.

Coordination with Other Sectors

- Other feasible settlement options such as rental are considered.
- A coordinated and realistic site plan is in place before building begins.
- There is a water and sanitation plan for the camp including water supply, site drainage, hygiene promotion and solid waste disposal.
- Site selection has taken place to ensure that the camp is located away from security and safety threats such as conflict areas or landslides.

Risk and Vulnerability

- Monitoring is in place to find out if the occupants are affected by violence or subjected to harassment, when accessing camp shelter assistance.
- There is no immediate risk to life due to inadequate shelter, clothing and bedding.
- Potential risks to lives, health and security through inadequate shelter have been assessed.

- ❑ The risks facing vulnerable people or groups with specific needs in the population, including those with HIV/AIDs, are known.
- ❑ Existing community strategies for supporting persons with specific needs are encouraged and gaps in provision are addressed.
- ❑ The effect of general living arrangements and the social organisation of the displaced population on the protection and care of vulnerable persons, are taken into account.
- ❑ The more vulnerable people, and those with specific needs, are being supported to construct or upgrade their shelters, and transport shelter materials from distribution sites.
- ❑ Measures are implemented to monitor and to improve the living conditions of those with specific needs and their carers or families.
- ❑ The need for vector control measures, particularly impregnated mosquito nets, is assessed to ensure the health and well-being of households.
- ❑ Vector control measures also include training, sanitation or treatment.

Contingency

- ❑ Potential further disasters such as fire are planned for.
- ❑ There is a plan in place and sufficient materials to deal with new population influxes and other scenarios.
- ❑ Discussions have taken place on more durable shelter plans between camp management, local authorities, and residents.

Management

- ❑ There is an active shelter organisation in the camp and they have sufficient resources, skills and capacities to support shelter needs.
- ❑ Skilled individuals (local or international) can be hired to support shelter programmes.
- ❑ Sufficient and skilled staff are monitoring construction projects.
- ❑ There is a functioning shelter committee which is representative of women, men and minority or vulnerable groups with specific needs and which has a clearly defined role.

Household Activities

- Household and livelihoods-support activities typically taking place in and around the shelters of the affected population are known about, and considerations of space provision are addressed.
- The different needs and activities of women and men, children and persons with specific needs around the shelter, have been taken into consideration.

Host Community and Environmental Impact

- Issues of concern for the host community are known and are being addressed.
- The shelter provision in the camp is in line with local practices and norms.
- Considerations are made as to whether shelters and shelter infrastructure can be used by the host community when the camp is closed.

Other Considerations

- The environmental impact of shelter, fuel, sanitation and waste disposal is assessed and planned for.
- Livelihood support opportunities are considered through the sourcing of materials and the construction of shelter and settlement solutions.

Maintenance

- The issues or improvements that have the highest net worth to inhabitants are assessed.
- People are supported to maintain their shelters through the most appropriate means.
- The Camp Management Agency advocates for solutions in the event of any administrative reasons why people cannot upgrade their shelters.
- There is physical space available to upgrade or expand shelters.
- Camp residents have access to tools and materials to upgrade their shelters.
- The impact of upgrades on local natural resources is accounted for.
- Physical and technical support is provided as appropriate to help camp occupants maintain their shelters.

TOOLS

! Almost all the tools, publications and other documents referred to are available on the **Toolkit CD** attached to every hardcopy binder. Weblinks are provided for downloadable online resources.

- Sample of a transitional shelter strategy
- Transitional Housing – Tenancy Agreement (sample from East Timor)
- Outline of technical implementation of transitional shelter
- Oxfam briefing note on shelter and gender
- Oxfam briefing note on shelter minimum standards
- UN-HABITAT, SUDP. Bosasso- Guidelines for the Planning and Upgrading of IDP Settlements (1 & 2)

READING AND REFERENCES

Sultan Barakat, 2003, “Housing reconstruction after conflict and disaster”. Humanitarian Policy Network. www.sheltercentre.org/shelterlibrary/items/pdf/NetworkPaper043HousingReconstructionAfterConflictAndDisaster.pdf

Alexandra Causton and Graham Saunders, 2006. “Responding to Shelter Needs in Post-earthquake Pakistan: a Self-help Approach”, *Humanitarian Exchange* 34. www.odihpn.org/report.asp?id=2810

Centre on Housing Rights and Evictions (COHRE). *The Pinheiro Principles – United Nations Principles on Housing and Property Restitution for Refugees and Displaced Persons*. www.cohre.org/store/attachments/Pinheiro%20Principles.pdf

CHF International, 2005. *The Economic Impact of Shelter Assistance in Post-Disaster Settings*. http://www.chfhq.org/files/2136_file_EIES_final.pdf

Tom Corsellis and Antonella Vitale, 2005. *Transitional Settlement Displaced Populations*, Oxfam Publishing. www.sheltercentre.org/shelterlibrary/items/pdf/Transitional_Settlement_Displaced_Populations_2005.pdf

J. Davies and R. Lambert, 2003. *Engineering in Emergencies*, ITDG.

Emergency Shelter Cluster. *Key Things to Know.*

<http://ocha.unog.ch/humanitarianreform/Portals/1/cluster%20approach%20page/clusters%20pages/Em%20Shelter/Key%20THINGS%20TO%20KNOW.doc>

Paul Harvey, 2007. “Cash-based responses in emergencies”. Humanitarian Policy Group. www.odi.org.uk/HPG/papers/hpgreport24.pdf

Médecins Sans Frontières (MSF), 1998. *Temporary & Semi-permanent Buildings for Health Structures in Refugee Camps.* www.sheltercentre.org/shelterlibrary/items/pdf/MSF_TempSemiPermBuildings4InRefugeeCamps1998.pdf

MSF, Shelter Centre, 2006. *Shade Nets: Use and Deployment in Humanitarian Relief Environments.* www.sheltercentre.org/shelterlibrary/items/pdf/Shade_Nets_Field_Booklet.pdf

Multi-agency, 2007. *Housing and Property Restitution for Refugees and Displaced Persons: Implementing the “Pinheiro Principles”, Handbook.* <ftp://ftp.fao.org/docrep/fao/010/al131e/al131e00.pdf>

OCHA, 2003. *Glossary of Humanitarian Terms in relation to the Protection of Civilians in Armed Conflicts.*

OCHA, 2004, *Tents – A Guide to the Use and Logistics of Family Tents in Humanitarian Relief.* <http://ochaonline.un.org/OchaLinkClick.aspx?link=ocha&DocId=1002112>

OCHA, IFRC, CARE, 2008. *Timber. A Guide to the Planning, Use, Procurement and Logistics of Timber as a Construction Material in Humanitarian Operations* www.humanitarian timber.org/files/download/TIMBER_Draft_1.0_Jan_08_A5.pdf

OXFAM, IFRC, 2007, *Plastic Sheeting Guidelines. A Guide to the Specification and Use of Plastic Sheeting in Humanitarian Relief.* http://www.plastic-sheeting.org/ref/Plastic_Sheeting_2007.pdf

ProVention Consortium, 2007. *Tools for Mainstreaming Disaster Risk Reduction.* www.proventionconsortium.org/themes/default/pdfs/tools_for_mainstreaming_DRR.pdf

Shelter Centre, 2007, *Shelter after Disaster.* www.sheltercenter.org/sheltercentre/attached/SM07b-SAD.pdf

The Sphere Project, 2004 *Humanitarian Charter and Minimum Standards in Disaster Response*. www.sphereproject.org/component/option,com_docman/task,cat_view/gid,65/Itemid,203/lang,English/

UNEP, 2007. *After the Tsunami. Sustainable Building Guidelines for South-East Asia*. http://postconflict.unep.ch/publications/dmb_bb_tsunami.pdf

UNHCR, 2006. *Master Glossary of Terms, Rev. 1*. www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?docid=42ce7d444&page=search

UNHCR, 2007 *Handbook for Emergencies*. www.reliefweb.int/rw/lib.nsf/db900SID/AMMF-75TFLQ?OpenDocument

***Winterised Shelter Assistance for Disaster Affected Populations in Post-earthquake Pakistan 2005*.** [www.humanitarianreform.org/humanitarianreform/Portals/1/cluster%20approach%20page/clusters%20pages/Em%20Shelter/Tollkit%20Field/8.2%20Pakistan%202005/8.2.2%20Shelter,%20Building%20Safety,%20Winterization/8.2.2.1%20Winterisation%20Plan%20\(11%20Nov%202005\).pdf](http://www.humanitarianreform.org/humanitarianreform/Portals/1/cluster%20approach%20page/clusters%20pages/Em%20Shelter/Tollkit%20Field/8.2%20Pakistan%202005/8.2.2%20Shelter,%20Building%20Safety,%20Winterization/8.2.2.1%20Winterisation%20Plan%20(11%20Nov%202005).pdf)