

# *5 Site Selection*

This section applies to the third scenario described at the beginning of this chapter, where the only available means of providing shelter for a displaced population is a planned temporary settlement.

A well-situated and well-planned temporary settlement provides a healthy environment where people can live in dignity and at peace, and where they can lead as sustainable a family life as possible. In meeting minimum standards, site selection and planning should aim to produce the best living conditions possible under the circumstances, with minimal damage to the environment.

The site selection and planning standards are structured around the assessment process and subsequent steps that should be taken to establish the type and form of settlement appropriate to the needs of the displaced population. Site selection is determined with reference to four types of temporary settlement. Once the preferred option has been identified, information from the physical assessment is then used to decide whether this can be achieved and, if not, what compromises should be made.

## **Site standard 1: site selection**

The site is suitable to host the number of people involved.

### **Key indicators**

- Assessments of the socio-economic profiles of the displaced and host populations and of physical and environmental factors are carried out.
- The appropriate type of temporary settlement required is determined: reception or transit centre; self-settled camp; planned temporary settlement or extension to a temporary settlement.

- The form the settlement should take is determined with reference to:
  - Information generated by the physical assessment.
  - Actual or potential threats to the security of the affected population.
  - The maximum estimated duration of the settlement.
  - The preferred population density of the settlement.
  - The level of integration of the displaced population with the host population.
- Where possible, the site meets the following requirements:
  - It is located at a safe distance from possible external threats to physical security.
  - It is less than 5km from an all-weather road for access by heavy trucks. Light four wheel drive trucks are able to reach distribution areas and construction sites.
  - It is near to existing social and economic facilities where appropriate.
  - There are adequate quantities of water (for drinking, cooking, hygiene and sanitation).
  - It is not less than 3 metres above the anticipated water table in the rainy season.
  - Water rights, and the right to use other natural resources such as wood, stone, sand, are arranged before, or at the same time as, the site is selected.
  - Land rights and permitted use are firmly established prior to occupation.
  - The soil type is suitable for digging and water infiltration.
  - Vegetation: there are grasses, shrubs and trees for shade and to avoid soil erosion.
  - The site is at least 10km from protected or fragile areas.

- The site is not prone to tidal waves or flooding, is not situated on land at risk from landslides, and is not close to an active volcano.

## **Guidance notes and critical issues**

1. When a displaced population settles close to a larger host community it can benefit from access to locally available infrastructure services and livelihood opportunities. More usually, however, the displaced population greatly outnumbers the host communities. This can place great demands on the local infrastructure, economy and environment, which in turn can create animosity between the two communities. Careful site selection and planning are thus critical in minimising possible negative impacts, and determine the effectiveness of the wider humanitarian assistance programme and the security of the affected population.
2. See also Analysis standard 1, assessment, which gives indicators for the socio-economic assessments of both the displaced and host communities. Criteria for the physical assessment are given in note 5 below.
3. The assessments provide information that guide selection of the type of settlement (this note) and the form it takes (note 4). There are four basic types of temporary settlement:
  - a) **Reception or transit centres:** where displaced people or refugees stay for short periods. The centres should be considered as planned camps (c below) when the environment is unable to sustain the demands upon it, or when they have to operate over a longer period.
  - b) **Self-settled camps:** where people have settled spontaneously, yet require partial relocation, provision of infrastructure and sustainable environmental resources.
  - c) **Planned temporary settlements:** where settlements are constructed and serviced by physical planners in advance of arrival of people (eg from reception or transit centres).

- d) **Extensions to temporary settlements:** where extension to the settlement is required to accommodate new arrivals (eg from reception or transit centres).
4. Having identified the type of settlement, the next step is to decide the form it should take. This should take into account information from the socio-economic assessment and the following:
- a) **Security of the displaced population:** whether there are threats from within the displaced population, from the host population or from other parties.
  - b) **The maximum envisaged duration of the settlement,** so that a phased programme can be implemented when resources and time are available. This should determine the form of infrastructural assistance and sustainable limits on the use of environmental resources.
  - c) **The preferred population density of the settlement:** this is key to the level of self-sufficiency that the displaced population is able to maintain. Self-sufficiency can be determined by assessing their culture, the quantity of their livestock and agricultural skills.
  - d) **The level of integration with the host population:** this impacts on the economies of both populations and influences longer term opportunities for the host population.
5. Once the preferred type and form of settlement have been identified, information from the physical assessment should be used to decide whether the preferred option can be achieved and, if not, what compromises should be made. Specialist advice may be required at this stage. The physical site assessment should address the following:
- a) **Access**
    - Proximity and condition of local road infrastructure.
    - Proximity to host service infrastructure and whether siting will affect this positively or negatively.
    - Proximity to airstrips, railheads or ports.
    - Seasonal constraints on access, and vulnerability of access.

**b) Topography**

Site gradients and expected density of occupation.

Natural hazards including earthquakes, volcanic activity, landslides or flooding.

Permeability of the ground. For example, fissured rock will disperse latrine waste widely; volcanic rock makes latrine construction difficult. (See Water Supply and Sanitation standard 2, excreta disposal, in chapter 2.)

Micro-climactic conditions.

**c) Water (see Water Supply and Sanitation, chapter 2)**

Availability of sufficient water within a suitable distance throughout the year for displaced people, the host community, agriculture and livestock.

Whether there is more than one source of water, in order to reduce the vulnerability of the water supply.

Height of the water table, whether it risks pollution by sanitation and flooding, and seasonal variations.

**d) Space**

Whether there is sufficient space for the desired density of the population and dispersal of that population into the number of settlements required.

Whether there is space for extension of the settlement(s), should the population increase.

Current land use and expected impact of the settlement on the land.

The levels and types of agriculture and livestock that can be supported.

**e) Environment**

Expected temperature, wind and rainfall in terms of their influence on planning, agriculture and livestock.

Existence of environmentally vulnerable or valuable areas nearby.

Availability of sufficient, sustainable quantities of wood for fuel and construction for both the displaced and host populations.

Endemic diseases, pests, risk of disease. (See Health Services standard 3, control of communicable diseases, in chapter 6; Water Supply and Sanitation standard 4, vector control, in chapter 2.)

Throughout this process it is essential that site selection is guided first and foremost by the needs of the affected population(s) rather than by purely technical considerations or the establishment of assistance mechanisms.

6. For an alternative method for site selection, from an engineering perspective, see the site selection matrix in Davis and Lambert (1995), listed in Appendix 1.

## **Site standard 2: site planning**

Site planning ensures sufficient space for household areas and supports people's security and well-being. It provides for effective, efficient provision of services and internal access.

## **Site standard 3: environmental concerns**

Environmental protection measures minimise damage that may be caused by the displaced population and assistance interventions.

### **Key indicators**

- The site provides 45m<sup>2</sup> space for each person. This includes infrastructure (eg roads, sanitation, schools, offices, water systems, security/fire breaks, markets, storage facilities, shelter locations), but excludes land for agriculture (crops and livestock).
- Clusters of living areas or village groups are established.
- Empty land for possible future expansion is identified.

- There is provision for social facilities such as markets, places of worship, graveyards, health facilities, solid waste disposal, water points, community and nutrition centres, workshops, wood lots and recreational areas.
- There is provision for facilities required by humanitarian agencies such as administrative offices, warehousing and staff accommodation.
- There are firebreaks at least every 300 metres, 50 metres wide. Roads may be used as firebreaks.
- There is a graveyard for each population group and graveyards are appropriately located.
- Quarantine camps are established, or sites are identified and prepared, in isolation from general residential areas, in order to minimise the spread of an epidemic.
- Planning of temporary settlements takes into consideration density and dispersal of the displaced population as a means of controlling access, and minimising damage, to environmental resources:
  - In fragile environments, the displaced population is concentrated in order to contain non-sustainable demand on the environment.
  - In more robust environments, the displaced population is dispersed into a number of settlements.
- Agreed levels of animal husbandry and agricultural activity by the displaced population are environmentally sustainable.
- During site planning, trees are spared as far as possible, and roads and drainage patterns are planned in such a way as to make use of natural contours.
- Measures are taken to protect or conserve forestry, or to promote reforestation where appropriate.
- If possible, the site has a gradient of not less than 2% to enable surface water drainage, but is not more than 6% to avoid landslides, and for ease of habitation.

## **Guidance notes and critical issues**

1. Site preparation should begin with the protection of vulnerable elements within and around the site. This includes water sources, land use by host populations and vegetation important in controlling shade, wind and soil erosion. People with expertise on the environment (forestry, household energy, alternative energy, site planning and development, environmental education), particularly those with local knowledge, should be identified as soon as possible.
2. Wherever possible, the social structure of the displaced population should be reflected in the planning of the temporary settlement, which should take into account needs for markets, meeting places, recreational areas and so on. These facilities are essential in supporting the re-establishment of the displaced communities. Existing forms of social representation should also be supported, given the importance of consultation with displaced people and their involvement in humanitarian interventions.
3. In a transit centre, and in the emergency phase for other temporary settlement types, requirements are different and are based on the need to access vulnerable groups within the displaced population. However, if it is expected that the settlement will continue beyond the emergency phase, space should be allocated in the manner described in note 2 above.
4. The socio-economic, physical and environmental assessments begun during the site selection stage should continue to inform the planning phase, where appropriate (see Site Selection standard 1, above).
5. Planning for self-settled sites often presents numerous difficulties, which can be identified by applying retrospectively the site selection process outlined in the guidance notes to Site Selection standard 1, above. Common problems include the following:
  - They are on unsuitable sites, or are on land used by local populations.
  - They are either too large or too small to be sustainable or to service.



- If there is more than one site, they are too dispersed to service efficiently.
- If concentrated on the area of initial occupation, they are too dense.
- They do not offer equal access to water or other services.
- They do not leave space for roads or service infrastructure.

Common responses to these problems are:

- To relocate, allowing the self-settled camp to act as a transit centre, and allowing the displaced community to re-form.
  - To make improvements in rotation: changes are made to one sector and the neighbouring population is moved into it before changes are made to the next sector.
  - To make piecemeal improvements, which is less invasive.
6. New UNHCR guidelines (unpublished at time of writing) indicate a total space requirement of 45m<sup>2</sup> per person, which includes a small space for kitchen gardening. Planning should take into account the dynamic evolution and growth of a camp. Population growth and the arrival of more people may see the camp expand by up to 4.5% annually, as has been the case in the past. Early repatriation or reintegration should be planned for as well.
  7. Planning must be driven by the needs of the people affected by a disaster, not by funding, and the disaster affected communities should be involved right from the start. Donors must commit themselves to the entire humanitarian programme, not only to the phase that attracts media attention, as has often been the case. Relatively higher levels of funding may be available at the beginning of an emergency, often as a result of media attention. This should be used wisely by investing in equipment that lasts and that needs little financial input for operation and maintenance.
  8. The impact of displaced people on the environment can be immense. This is not always immediately visible but can take decades to rectify. Habitats and species diversity can be negatively affected. Taking more water from an aquifer than flows into it

causes a lowering of the water table, which can dry up local wells. Using all available grasses, wood and roots for construction and fuel increases soil erosion. Wood harvesting can also become an income-generating activity of the displaced population, often causing environmental damage and conflict with local people. These factors all need to be considered.

9. Limiting space does not encourage people to repatriate, but increases their dependency on the system. Large groups of people in a limited space pose an unacceptable strain on the environment, the local labour market, camp management and security. Limiting space is a false economy. Although initial costs may seem lower, the cost of restoring the environment and continuing to provide care for people will be high in the long term. Paying for these long term costs is likely to be difficult because funding levels later on will be lower than the funding available at the start of the humanitarian intervention. Funds should be invested appropriately right from the start to prevent long term damage to the environment and to people's lives.
10. No matter how much agricultural and habitation land is allocated to each family, people will return to communal areas to collect wood if there are no alternative sources of fuel. On a sustainable basis, it is assumed that 500 people need 1km<sup>2</sup> of undisturbed forest to cater for their annual fuel wood consumption need of 600-900kg per person. Assuming however that only 20% of forest is undisturbed, only 100 people would be able to access the land.
11. Graveyards must be located more than 30 metres from sources of water for drinking (in soil and more in fractured rock formations), and at least 3 metres above the water table if it is not the source of drinking water. Surface water from graveyards must not enter the settlement. Customs of the local and displaced population should be considered. (See Water Supply and Sanitation, Solid Waste Disposal standard 2, solid waste containers and pits, guidance note 5 relating to the dead, in chapter 2.)
12. The use of the modular 'building block' approach advocated by UNHCR facilitates people's access to needed services and saves planning time.

13. Good maps that indicate land tenure, drainage patterns and available space should be obtained. Often the military have such maps at a scale of 1:50,000. More detailed maps (1:10,000) can be drawn during and after site visits and aerial photographs can be used. Survey information can be transferred on to a map that can be added to as the camp develops.
14. Skill is needed in interpreting data on potential sites, such as topography, water sources, drainage, wooded area, land use, rainfall data, geological and hydro-geological data. It is important to be aware of possible gaps in the information and changes that may have occurred since it was gathered. A specialist is needed to interpret hydro-geological data. The local population should be consulted on all of the above.

## **Site standard 4: security and planning**

Site selection and planning enables the personal liberty and security of all people, particularly groups at risk.

### **Key indicators**

- The site is located at a safe distance from possible external threats to physical security.
- Site planning ensures that safe living areas are provided for groups at risk.
- Social, health, sanitation and other essential facilities are safely accessible, and are lit at night if necessary.
- Cluster planning is used in order to support self-policing by the displaced population.
- The overall size of the settlement population does not exceed a level that makes internal and external security and protection measures ineffective.
- Internal and external security and protection activities are carried out by the host authorities and/or the relevant UN agency.

- The agency assigned responsibility for overall coordination assists with internal security for groups at risk.
- Reasonable steps are taken to ensure that staff are not at risk. In insecure areas an evacuation plan is agreed between agencies.

## **Guidance notes**

1. Security for all people affected by the disaster, and for field staff, is of crucial importance. Careful site planning that takes into account internal and external risks, and identifies the needs of particular groups, especially women, will help reinforce security measures taken by host authorities and UN agencies.
2. Care should be taken to avoid providing a level of humanitarian assistance that exceeds the living standards of the host population as this can lead to resentment and conflict.
3. The coordinating agency should ensure that there is lighting in strategic areas at night and that female headed households and single women are housed closer together, in secure areas near facilities, but not in such a way that 'ghettos' are created.