

Fire prevention

Fire hazards

**Domestic,
Settlements
Evacuation centre's**



Fire hazards

Fires are usually caused by

- Household activities such as cooking, creating light with candles, electrical appliances etc.
- Livelihood activities involving open fire

Combustible materials increase the hazard

- grass and thatch roofs
- timber-framed structures
- card-board and textile

Fire hazard in Urban areas

In urban areas, the greatest danger from fires is caused by activities in the settlement itself.

Proper spatial planning reduces the risks off “flashover”

Fires can spread quickly (flashover):

- in high-density communities (informal settlements) without proper spatial planning (fire breaks and service roads)
- fire brigade can't access informal settlements
- when combustible materials are used for buildings.

Fire hazard in Rural areas

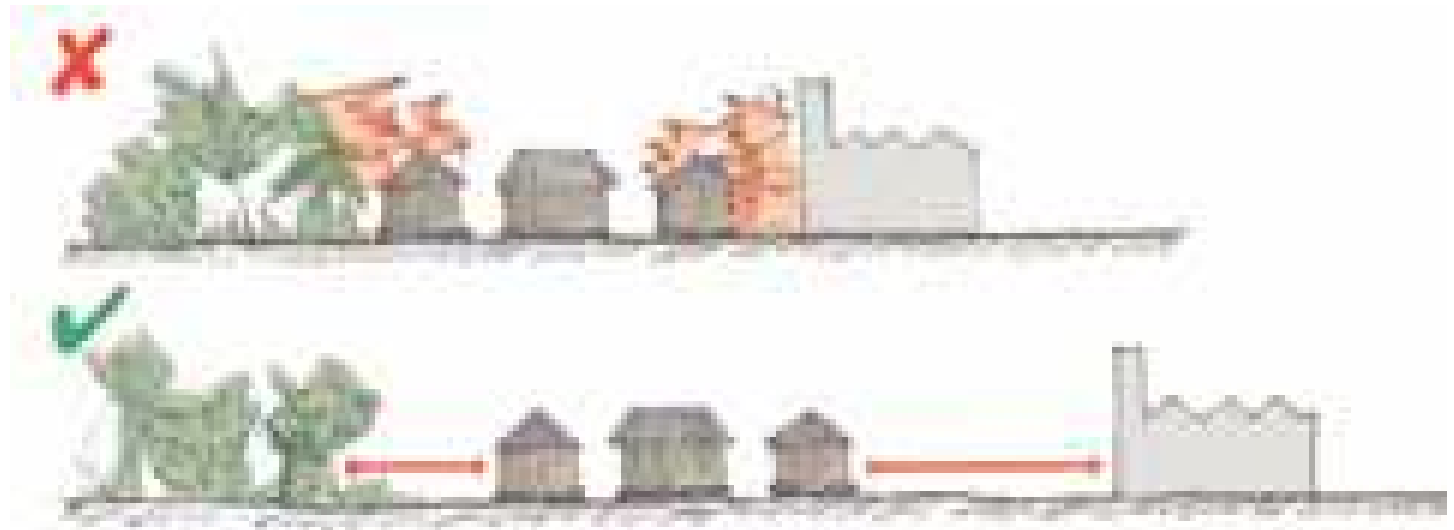
Rural areas face additional hazards of forest- or bush fires that start outside the settlement.

Communities most at risk:

- not surrounded by sufficient fire-breaks
- shelters are built of combustible materials.

Site planning and settlement

Choose a site that is protected from, or distant from, fire hazards such as industrial zones and bush- / forests.



Site planning and settlement



Allow for space between shelters or rows / blocks of shelters whilst taking into account the direction of any prevailing wind

Site planning and settlement

Allow space between individual shelters and any potential fire source such as a craft workshops, kitchens etc.



Construction materials

If possible, build shelters with non-combustible construction materials.

Protect combustible materials with fire retardant or by covering with non-flammable material e.g., (thatched roof is more vulnerable to fire than corrugated iron sheets)

Community Preparedness

Set up a warning system to alert community members

Consider to establish water points at strategic places

Identify and train fire-fighters within the community

Have fire-fighting equipment available in the community and practice the use frequently

Domestic Preparedness

Raise awareness for domestic fire hazards

Cooking on open fire

Providing light with candles
(close to combustible materials)

Have fire-fighting equipment ready at household level and practise its use regularly.

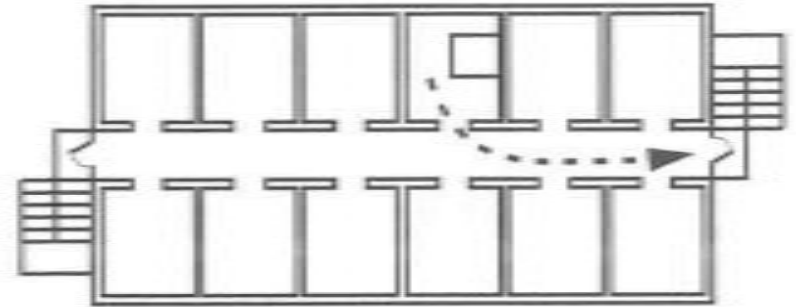
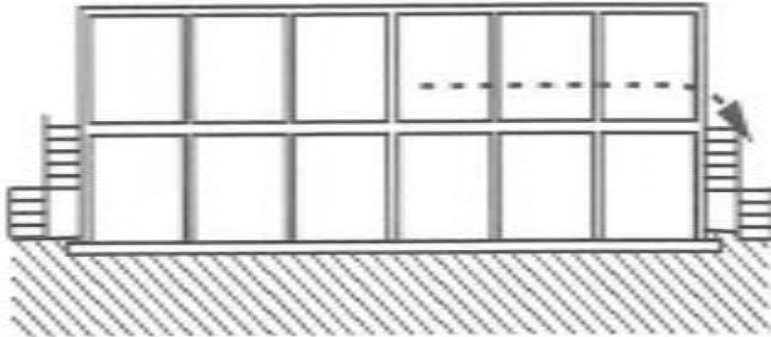
Include all family members, especially the young ones

Collective / evacuation centre's

High fire hazards :

- Over crowded (high risk of
- Loose clothing
- Open fires for indoor cooking / heating
- Dangerous extension electrical system

Collective / evacuation centre's



- The longest distance to fire escapes should be less than 18 m from any part of the building
- Consider locating disabled people on the ground floor whenever possible.
- Fire exits should be clearly marked and kept open.

Camp planning

A camp with approx. **20,000 inhabitants** (4 sectors)

- Fire breaks: 30m between sectors

Each sector with approx. **5,000 inhabitants** (4 blocks)

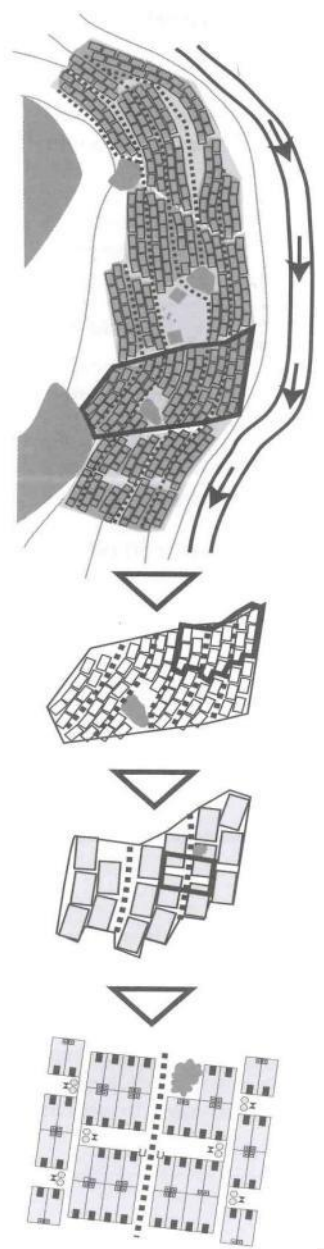
- fire breaks: 15m between blocks
- should contain central/recreational spaces

Each block having approx. **1,250 inhabitants**
(16 communities)

- fire breaks: 6m (pathways)

The community/cluster with approx. **80 inhabitants**
(16 clusters; each with 16 shelters)

- fire breaks: at least 2m between dwellings



Defining a Fire break

Rule of thumb:

A 30 m wide fire-break (with no buildings) is recommended for approximately every 300 m of built-up area.

In camps fire-breaks should be situated between blocks. This area will be ideal for growing vegetables or recreation.

The direction of any prevailing wind will also be an important consideration.

Defining a Fire break – cont.

If the situation allows, the preferred distance between buildings should be great enough for a burning structure to collapse, without touching adjacent buildings.

The recommended distance between structures should be twice the height of any structure;

When using highly inflammable building materials (straw, thatch, etc.) the distance should be increased to 3 to 4 times the overall height.

FIRE SAFETY

PREVENTION

- NO open fires or bare flames inside tents



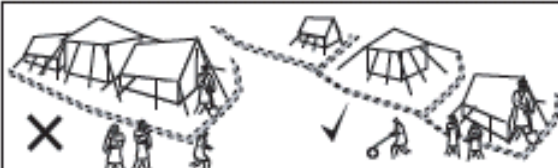
- Candles must be placed in lamps or in jars



- Never leave a candle lit while sleeping or when leaving the tent.



- Tents walls must be a minimum of 16 feet apart.



- Stoves must not touch tent walls.
- Chimneys should go through a solid wall or through a fire-proof plate.



- Do not smoke inside tents.



- Electric light bulbs must be at least 6 inches from the tent canvas.



PREPAREDNESS

- Set up community fire committees, for training and fire fighting.



- Make fire stations with buckets, sand, fire beaters and fire extinguishers.



IN CASE OF FIRE

clothes on fire



STOP, DROP AND ROLL.

If your clothes are on fire,
STOP where you are,
DROP to the ground and
ROLL to extinguish the flames

tent on fire



- Check that there is no-one inside.
THEN knock down the tent.
This will help stop the fire from spreading.

burns



- Cool the burn area with cold water or a wet cloth immediately.

Smoke hazard

Heat and flames kill and injure, but smoke and toxic gases are equally dangerous.

Smoke and toxic gases can cause casualties outside the building as well.

Smoke from fires is dangerous not only in an emergency but in day-to-day activities, such as the burning of vegetation and dung in a building for cooking.

Smoke hazard

daily exposure to smoke cause the following effects:

- reduced effectiveness of the immune system
- increased rates of respiratory infections, including pneumonia, particularly in children
- increased rates of other lung diseases, including lung cancer, tuberculosis, and asthma
- low birth weight and increased infant mortality
- increased incidence of cataracts of the eye.

Smoke hazard

Reducing the exposure to smoke should be a major goal in humanitarian responses and should include:

- provide improved / fuel efficient cooking devices
- consider alternative fuels for cooking
- provide sufficient ventilation
- encouraging people to avoid the smoke, for example by keeping children away from it.



THANK YOU FOR
YOUR ATTENTION

Any Questions ?

FOR FURTHER INFORMATION ON **SHELTER & SETTLEMENT**, PLEASE CONTACT:

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