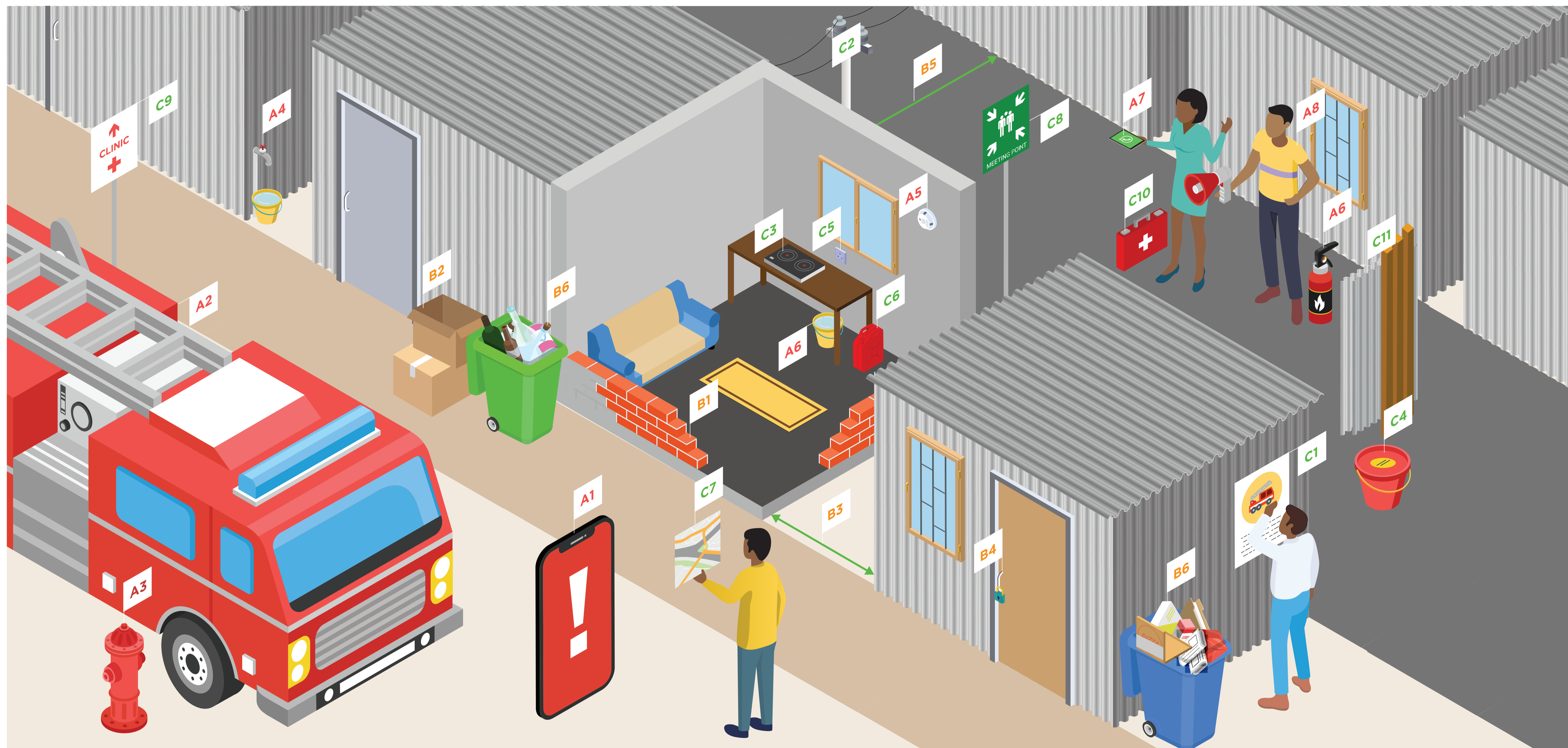


FIRE SAFETY FOR INFORMAL SETTLEMENTS & BACKYARD DWELLINGS OPPORTUNITIES FOR IMPROVING SAFETY



ACTIVE FIRE PROTECTION / RESPONSE

- A1** Know the local fire department number (NOT 101111)
- A2** Fire department intervention
- A3** Fire hydrants
- A4** Water provision inside or near homes
- A5** Smoke or fire alarms
- A6** Water buckets/fire extinguishers/suppression products
- A7** Community-wide fire warning system
- A8** Community response teams

PASSIVE FIRE PROTECTION / PREVENT SPREAD

- B1** Fire resistant construction products
- B2** Reduce combustibles around homes
- B3** Safety distances (roads, paths) between homes
- B4** Escape from homes
- B5** Reblocking
- B6** Refuse removal

FIRE PREVENTION / RISK OF IGNITION / PREPAREDNESS

- C1** Education campaigns
- C2** Electrification
- C3** Good wiring and not overloading plugs
- C4** Fire safety kits
- C5** Better lighting, cooking and heating
- C6** Safe storage of fuels
- C7** Map area to identify risks and plan for incidents
- C8** Evacuation drills
- C9** Medical facilities
- C10** Medical training for community members
- C11** Post-fire recovery (disaster kits and insurance)

FIRE SAFETY FOR INFORMAL SETTLEMENTS & BACKYARD DWELLINGS

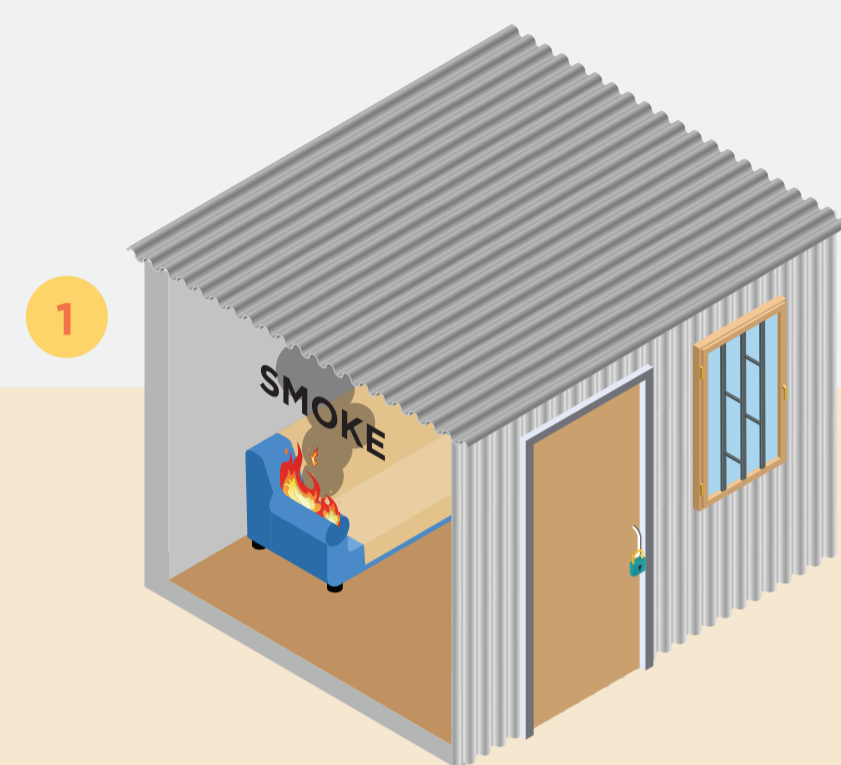
UNDERSTANDING FIRE SPREAD

FROM SPARK TO INFERNO

Different interventions will work at different stages of a fire. The most important stages are:

1. IGNITION / INCIPIENT STAGE

Once a fire has started it spreads to other items (fuel) as it grows. Smoke and hot gases rise to the ceiling (the hot layer) while people may still be able to survive in the lower, cold layer. Once smoke fills the room, people will die of asphyxiation.



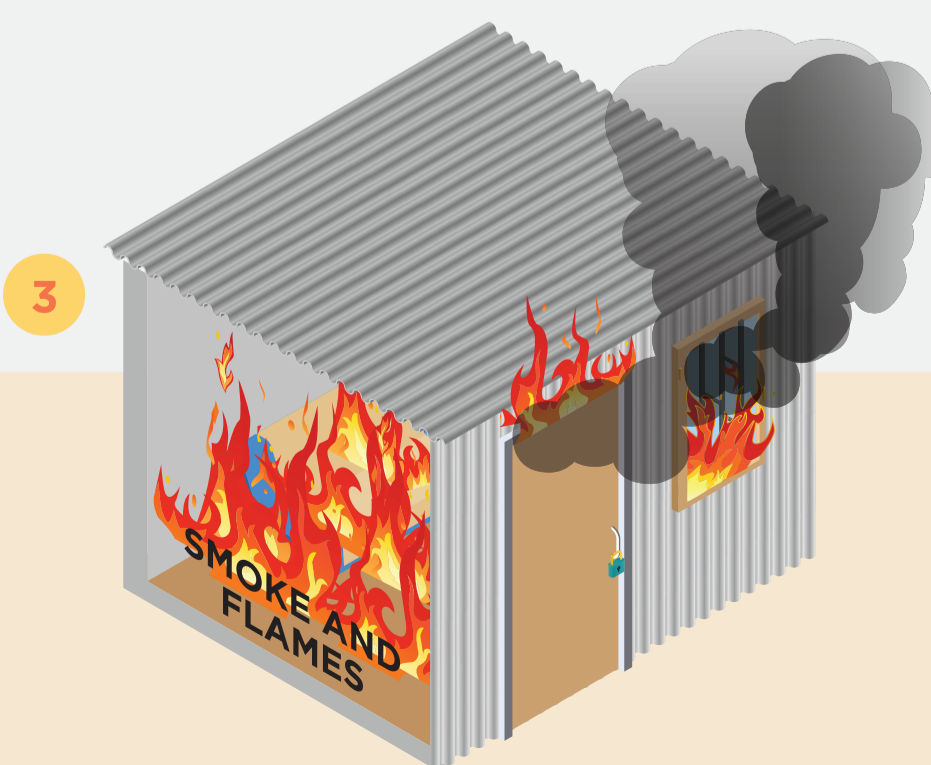
2. PRE-FLASHOVER / GROWTH

The fire grows and hot gases rise to the roof. When the hot layer reaches around 500-600°C "flashover" occurs when suddenly the fire spreads to all exposed combustible surfaces in the home.



3. POST-FLASHOVER / FULLY-DEVELOPED

Temperatures reach 800-1200°C and nobody will survive. Flames will come out of any openings. Fire spread to nearby dwellings will occur.

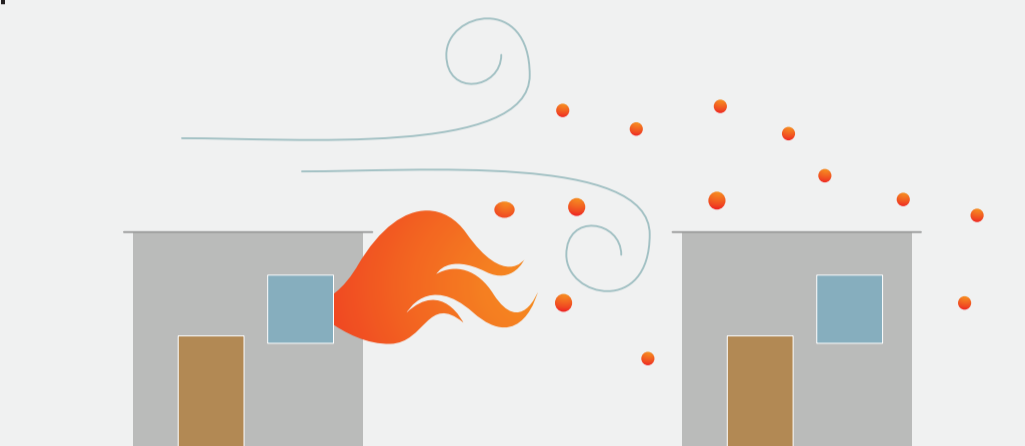


WHAT MAKES FIRES SPREAD FASTER?

There are many factors that influence how fast fires will spread through an informal settlement or suburb. By understanding these you can identify higher risk areas.

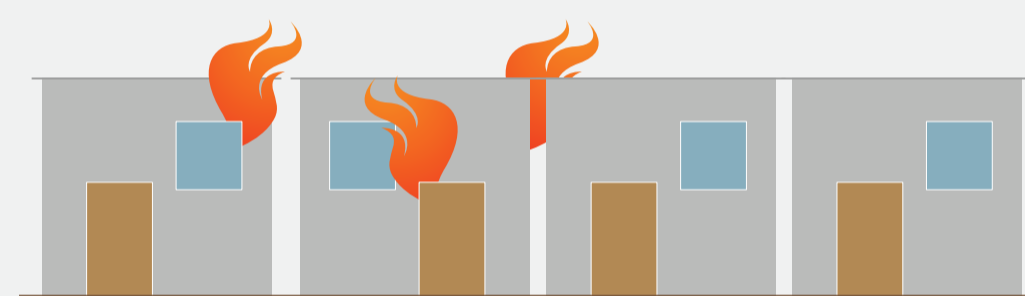
WIND

Strong winds will make fires move much quicker. Small burning embers are blown over obstacles (e.g. walls, rivers, roads) and cause spot fires.



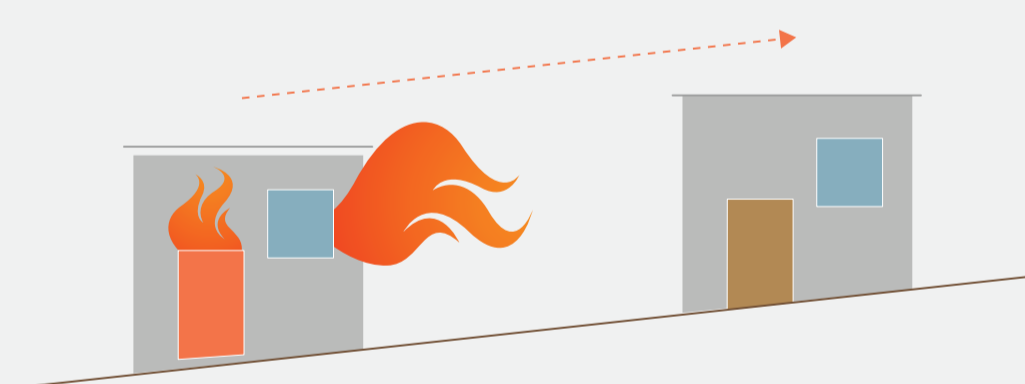
DENSITY AND SPACING OF HOMES

Fires move very quickly through areas where homes are close together. People cannot escape easily from dense settlements.



SLOPE

Fires spread much faster uphill than down.



MATERIALS

Thin items ignite quickly. Plastic sheets on roofs, curtains, rubbish bags outside, cardboard linings and newspaper pushed into holes provide a route for fires into homes.



MOISTURE

During dry seasons and droughts fires spread faster. However, many smaller fires occur in wet weather from indoor cooking and heating.

FIRE SPREAD BETWEEN HOMES

There are many ways that fire can spread from one home to another, and our interventions should try prevent this from happening.



FIRE SPREAD

- 1 **Flame impingement:** Flames can cross distances of 2-3m, or further in wind.
- 2 **Radiation:** Radiation can cause items 2-5m away, and further, to ignite.
- 3 **Branding/spotting:** Flaming brands can be carried long distances and start new fires.

FACTORS INFLUENCING SPREAD

- 4 Small holes in walls/roofs can easily allow flames to ignite homes.
- 5 Bigger openings (e.g. door) = bigger flames coming out.
- 6 Doors (if left open) and windows (glass falls out) will always be weak points.
- 7 Plastics (for waterproofing), cardboard, curtains etc. are easily ignited.
- 8 Wood, plants and rubbish act as fire bridges.

FIRE SAFETY FOR INFORMAL SETTLEMENTS & BACKYARD DWELLINGS

WHAT CAN WE DO TO BE PREPARED?



COMMUNITY PREPAREDNESS

EVERYDAY READINESS FOR FIRES

- Train community members about fire safety (e.g. putting fires out, electrical safety, cooking safety, the fire department number, evacuation, preparedness etc.).
- Develop a community preparedness plan.
- Have a family emergency plan prepared.
- Clear combustible items next to homes away from them.
- Have more than one way of escaping from a home (e.g. a weakened panel).
- Have a “grab bag” with documents, medicines and valuables in case of emergency.
- Have a printout/laminated page and other items (e.g. keyrings) with emergency numbers.
- Map evacuation pathways and identify assembly points.



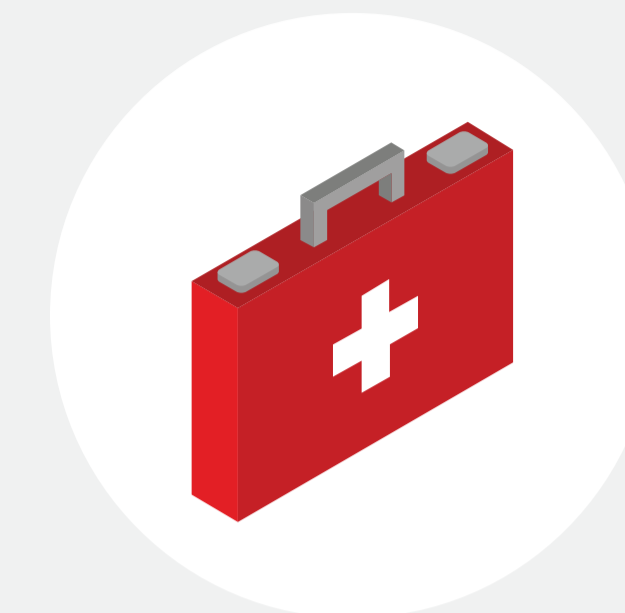
PREPARING YOUR HOME WHEN A FIRE IS COMING

- Evacuate immediately if the fire is close. Only carry out the activities below if safe.
- Close all doors and windows.
- Put curtains, combustible wall linings and furniture into the middle of a room such that they cannot be ignited as easily.
- Turn off the electricity and gas supplies.
- If possible, remove gas cylinders and paraffin bottles.
- Make sure your “grab bag” is ready.
- Clear any combustible items next to homes away.



WHEN A FIRE HAS STARTED

- Notify other residents.
- Alert the fire department. Provide directions/landmarks.
- If safe, carry out basic firefighting activities using bucket brigades, thick blankets or by collapsing dwellings.
- Put on the most protective clothing owned (e.g. leather, overalls, thick cotton). Avoid synthetic materials (e.g. nylon).
- Evacuate. Do not come back for possessions.
- Clear access routes to allow fire truck access.
- Guide the fire department to the fire site.
- Notify firefighters if flare-ups occur.
- Protect firefighters and municipal agencies.
- If possible, try to see which direction the fire is moving in.
- Keep fire hydrants clear. Help firefighters in locating them.
- Assist other community members.
- Obey any instructions from firefighters, police or municipal officials.



COMMUNITY RECOVERY AFTER A FIRE

- Assist injured people.
- Make recovery arrangements (e.g. temporary shelter).
- Work with municipal departments, Disaster Risk Management, organisations and NGOs providing relief.
- If possible, do not start rebuilding immediately.
- If possible, try to rebuild homes in a more ordered way, with better road and pathway access.
- Community leaders should assist with counting the number of affected homes and people.