

SEEDS is a non-profit voluntary organisation working to make vulnerable communities resilient to disasters. For this, SEEDS adopt a multi hazards locally based approach seeking to empower communities through awareness generation, training and action.

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# Community Based Disaster Preparedness

a handbook for task forces

# During any disaster th Hence, effective and are often attributed participation of the opeople. Hence, it is ir framework and know

During any disaster the local community is the first to react. Hence, effective and successful disaster reduction initiatives are often attributed to the spontaneous yet organized participation of the communities and involvement of the people. Hence, it is imperative to have a community-level framework and knowledge base in the form of disaster management task forces.

Accordingly, this handbook has been designed to act as a reference for the community-level disaster management task forces to list and illustrate the skills, techniques and procedures needed to confront the different situations that can arise when a natural hazard occurs.

This handbook does not claim to be a comprehensive guide. This is a supporting document to a wider community based disaster preparedness programme. Techniques and methods mentioned in the book are for reference and should be performed by trained individuals only.

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# early warning and communication task force

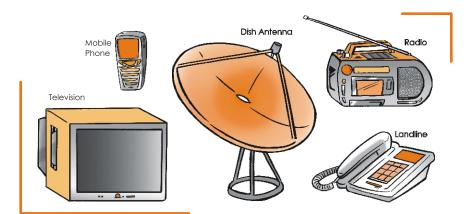


# What are the objectives of the task force?

- (1) To disseminate early warnings of a disaster to each and every household timely allowing the people to take preventive measures to protect their lives, property and livestock.
- (2) To provide accurate information at regular intervals and put to rest all undue rumors prevailing within the community.
- (3) To ensure smooth flow of accurate information from the local authorities to the community.

# Who forms the task force?

- (1) The task force comprises 3 to 7 members per village.
- (2) Members of the task force should be well versed in the local language and should be able to communicate verbally.
- (3) Members are trained to use landlines, mobile phones, radio, television, HAM radio and have knowledge of traditional as well as technical early warning methods.



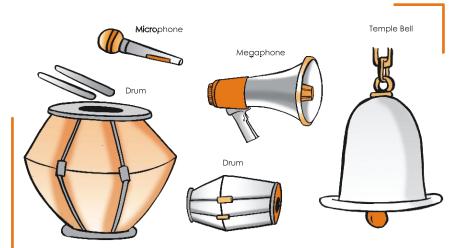
#### What does the task force do?

#### Non Disaster time

- (1) The task force will ensure that all the communication equipments and mechanisms are maintained and are in working condition.
- (2) The task force will maintain a comprehensive contact directory with contact numbers of all functionaries, departments, NGOs and community leaders up to the District level.

#### **Alert and Warning Stage**

- (1) The task force will contact the Pradhan/Patwari at the initial receipt of the warning.
- (2) The task force will assemble at a decided central location and listen to the radio or appropriate mode of communication together to analyse the situation.
- (3) The task force will look into the local warning signals such as behavior of livestock and changes in weather.
- (4) The task force shall crosscheck the warnings received on radio with the nearest control room [Panchayat office/ Tehsildar office / Patwari] over the phone and if that fails, with wireless communication.
- (5) The task force will disseminate warnings using megaphones, microphones, sirens, door to door announcements, ringing of temple bells, banging drums and hoisting signal flags.
- (6) The task force will carry out the hazard hunt and prepare a hazard map showing the most vulnerable areas, households, safe areas, shelters and evacuation.







# What are the objectives of the task force?

- (1) To identify, maintain and repair identified shelters.
- (2) To evacuate people to safe shelters at the time of emergency.

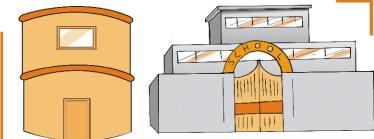
# Who forms the task force?

- (1) The task force comprises 3 to 7 members per village.
- (2) The task force will consist of local engineers, masons and people having knowledge about shelters.

# What does the task force do?

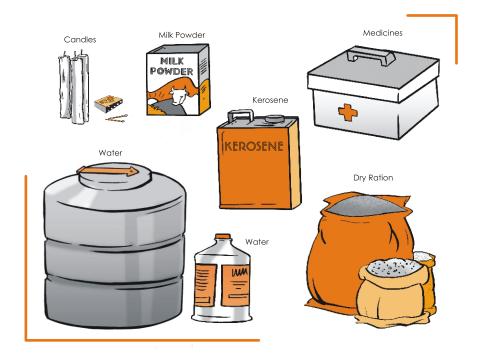
#### Non Disaster Time

- (1) The task force will monitor the infrastructure of the village such as roads, water tanks, schools, community halls, panchayat offices, religious premises etc.
- (2) The task force will coordinate with the local authority to identify or construct safe shelters and houses.
- (3) The task force will identify safe sites as intermediate shelters.



**Sa**fe Shelters

(4) The task force with the help of local authority and NGOs will keep a stock and replace when necessary dry ration, water, milk powder, medicines, candles and kerosene sufficient to last for a week.



- (5) The task force will ensure accessibility to the shelters and also look into the cleanliness of the shelters.
- (6) The task force will ensure that the shelter sites have basic utilities like drinking water tanks, toilets etc.

#### **Alert and Warning Stage**

- (1) The task force will evacuate the people and help them settle in the shelters. Special care will be taken of the old, physically challenged, children and pregnant or lactating women.
- (2) The task force will move the dry food, water, medicines, clothing and sanitary kits to the safe shelters.
- (3) The task force will ensure that sanitary practices are adhered to.
- (4) The task force will register the evacuees and give them identification cards, which they will carry with them to receive free rations, and other relief distributed by the local authority, Government and NGOs.



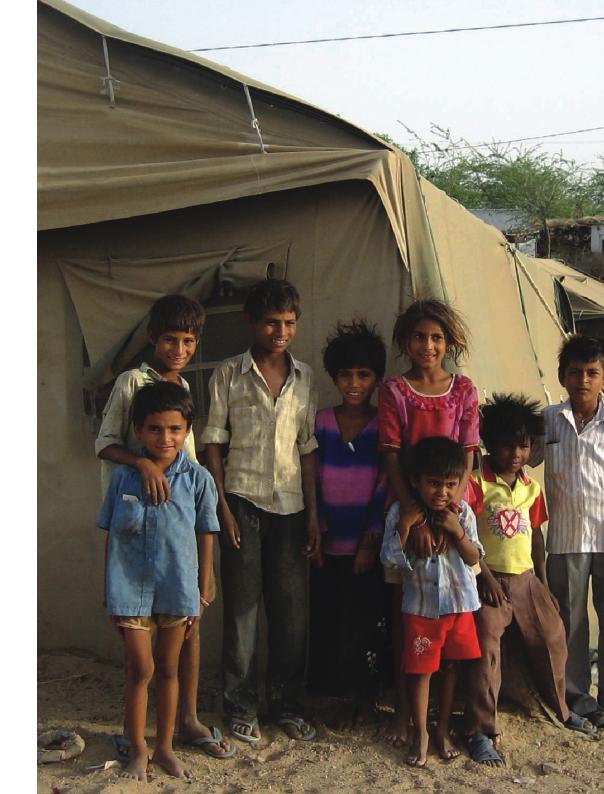
The task force registering the evacuees and giving them identification cards

#### **During Disaster**

- (1) During the disaster the task force will ensure that nobody moves out of the shelter site.
- (2) The task force will organize tents and other materials for the construction o temporary shelters to be provided to the local community.
- (3) The task force will replenish the food-stock, clothing, and fuel from the government sources, village grain banks and other sources.
- (4) The task force will clean and disinfect the shelter throughout the stay and before leaving the site.

#### After Disaster

- (1) The task force will help the community reconstruct the permanent shelters.
- (2) The task force will monitor the reconstruction and rehabilitation of the community.





# What are the objectives of the task force?

- (1) To provide primary health care to the ill or injured until more advanced care is provided and patient is transported to the hospital.
- Who forms the task force?
- (1) The task force comprises 3 to 7 members per village.
- (2) The group should have good knowledge of first aid methods and life saving techniques.
- What does the task force do?

#### Non Disaster Time

- (1) The task force will maintain a list of pregnant women, infants, disabled, sick and old in the village to ensure that their medical needs are met. Update of the list is also undertaken periodically.
- (2) The task force will keep the first aid kits ready and ensure that expired drugs are replaced periodically.
- (3) The task force as a regular practice will demonstrate uses of various medicines such as chlorine tablets, ORS etc.
- (4) The task force will keep and maintain all the necessary equipments like splints, stretchers etc.

### Alert and Warning Stage

- (1) The task force will ensure that the first aid kits are in good condition.
- (2) The task force will move into safe shelter sites.

#### **During Disaster**

- (1) The task force will stay in the safe shelter and coordinate with and assist the shelter management task force.
- (2) The task force will take care of the injured if any.

#### **After Disaster**

- (1) The task force will attend to the injuries and trauma of rescued people.
- (2) The task force will assist the doctors and paramedics to shift the ill and the injured to hospitals.
- (3) The task force will identify cases with infectious diseases and shall take measures to prevent them from spreading.
- (4) The task force will provide preventive medication for the diseases which are epidemic in nature like malaria, dysentery, cholera etc.
- (5) The task force will intimate the relief task force on the stock of medicines.



# What is First Aid?

First Aid is the immediate treatment given to the victim of an accident or sudden illness, before medical help is obtained.

# Bleeding

Bleeding is one of the most common causes of death. It is caused by the rupture of blood cells due to the severity of the injury. There are two types of bleeding: external bleeding, which is obvious and internal bleeding where the bleeding is not apparent at the outset but may manifest itself later in the form of bleeding from the nose, ear, lungs or stomach.

#### How to deal with bleeding?

- (1) Bring the sides of the wound together and press firmly.
- (2) Place the patient in a comfortable position and raise the injured part.
- (3) Apply a clean pad larger than the wound and press it firmly with the palm until the bleeding lessens and finally stops.
- (4) If the bleeding continues, do not remove the original dressing but add more pads.
- (5) Finally bandage firmly but not too tightly.

# Fracture

Any break in the continuity of a bone is called a fracture.

#### Types of Fracture

- (1) Closed fracture: One in which the overlying skin is intact.
- (2) Open fracture: One in which the skin has been broken or torn either from the inside or outside.

#### Dislocation

Injury in which a bone is moved out of its normal position in a joint and remains that way.

#### Sprain

Injury in which ligaments are stretched or partially torn, commonly associated with joint injuries. (ligament connects and holds bone at joints)

#### Strain

Injury in which a muscle or a muscle and tendon are over-extended. (tendon attaches muscle to a bone)









#### How to deal with fractures?

- (1) Handle the patient gently and avoid all unnecessary movments.
- (2) Treat for wound if present.
- (3) If the broken ends of the wound show out, do not wash the wound or apply antiseptics to the end of the bone.
- (4) Never attempt to reduce the fracture or bring the bones to the normal position.
- (5) Stabilise and support the injured part so that no movement is possible. This stops further injury and helps to control the bleeding.
- (6) Immobilise the fracture area and joints on both sides of the fracture site (above and below) by using bandages or by using splints wherever possible.

# Shock

Shock is a condition of collapse that should be treated as top priority, second only to attending to obstructed breathing, stoppage of the heart or severe bleeding.

#### How to deal with shock?

- (1) Reassure the patient if the patient is conscious.
- (2) Loosen tight clothing but do not remove clothing.
- (3) Place the patient comfortably on his back. Except in cases of injury to the head, chest or abdomen, lower the head slightly and turn to one side. Slightly raise the level of feet. In case of vomiting, place in three quarter back up position.
- (4) Never administer anything by mouth especially in cases of injuries to the chest or abdomen.
- (5) Do not rub any part of the body with anything.



Placement of patient at the time of shock

#### **Burns**

Injuries caused by exposure to excessive heat from thermal, chemical, electrical or radiating sources.

#### Classification of burns

- (1) Superficial (1<sup>st</sup> degree) burns: These involve only the top layer of the skin.
- (2) Partial thickness (2<sup>nd</sup> degree) burns: The superficial layer of the skin is burned and the second layer is damaged.
- (3) Full thickness (3<sup>rd</sup> degree) burns: All layers of the skin are burnt, including the fatty layer.

#### How to deal with burns?

#### Thermal burns

- (1) Stop the burning process. Run cold water over the scald burns for 20 minutes or more.
- (2) Remove any smouldering clothing and jewellery.
- (3) Perform initial assessment.
- (4) Administer oxygen per local protocol.
- (5) Determine the severity of burns.
- (6) Cover the burns. Use dry sterile dressing. Do not use grease, ointment, lotion, antiseptic orice on the burns. Do not break any blisters.

#### Chemical burns

- (1) Brush off dry chemical, such as lime powder, before flushing with water.
- (2) Rinse the area with water for at least 20 minutes or more.
- (3) Apply sterile dressing to the affected area.
- (4) Treat for shock.

#### Electrical burns

- (1) Perform initial assessment.
- (2) Evaluate burns and look for at least two burn areas.
- (3) Apply dry sterile dressing to the burns.
- (4) Treatforshock.

# The ABC of resuscitation

Time is absolutely critical in some of the tasks of first-aid, and minutes or even seconds can make the difference between life and death.

#### "A" for airway

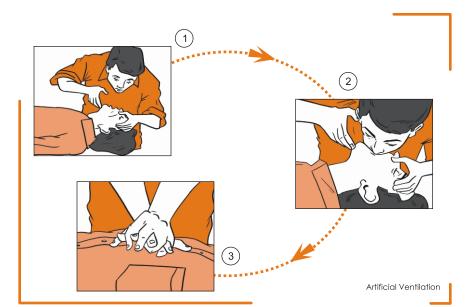
The tongue is the most frequent obstruction. Breathing may be restored using the Head-Tilt/Chin-lift method. Once a casualty's breathing has been restored, take steps to keep the airway open. See also "Breathing".

- (1) At an arm's distance, shake the casualty by touching the shoulder and shout, "can you hear me?"
- (2) If the casualty does not or cannot respond, place one hand on the forehead.
- (3) Place two fingers of the other hand under the chin and tilt the jaw upward while tilting the head back slightly. Be gentle and do not jerk the neck or back until you are sure that there are no closed injuries.
- (4) Look for chest rise.
- (5) Listen for air exchange.
- (6) Feel for abdominal movement.



#### "B" for Breathing (Artificial Ventilation)

- (1) Check the casualty's chest movement and listen to the heartbeat.
- (2) If you do not feel the breath on your check, start artificial ventilation immediately.
- (3) Keep the casualty's head well back.
- (4) Place your mouth over the casualty's mouth.
- (5) Give two full breathes.
- (6) Check that casualty's chest rises.
- (7) Continue with one breath every five seconds till the casualty breathes normally or medical help arrives.
- (8) If, on artificial ventilation, the chest of the casualty does not rise, reposition the head and start the artificial ventilation again.
- (9) To clear the airway, place the heel of one hand on the top heel of the other hand just above the navel but below the breastbone. Press down on upper abdomen with six to ten quick thrusts.
- (10) If this fails, open the patient's mouth by grasping lower jaw between the thumb and fingers and lifting chin. Grasp tongue to open airway. Insert index finger of the other hand deep into the mouth and use finger to remove the foreign body, if any.
- (11) Continue till the casualty breaths or help arrives.



#### "C" for Circulation

If the heart has stopped and there is no pulse, "CPR" can be applied to force blood through the heart and around the body. This should be combined with artificial ventilation so that blood is oxygenated.

# **Drowning**

Death by drowning usually occurs not because the lungs are full of water, but because a throat spasm prevents breathing. Usually only a relatively small amount of water enters the lungs. The water that usually gushes out of a rescued casualty's mouth comes from the stomach rather than the lungs and should be allowed to drain naturally.

- (1) While carrying or positioning a drowning casualty make sure that the head is lower than the body and towards one side so that water coming out of the stomach is not inhaled.
- (2) Put the casualty on a blanket ensure airway clear, check breathing and pulse, resuscitate if necessary. Perform ventilation and chest compression slower than normal as some water in the lungs may increase resistance.
- (3) Warm the casualty and treat for hypothermia, replace wet clothing, insulate from cold and give hot drinks.
- (4) Casualty to receive medical attention. Send casualty to hospital even if appears completely recovered. Secondary "drowning" can occur even hours later.

#### DO NOT USE ABDOMINAL THRUSTS UNLESS AIRWAY IS BLOCKED

# First Aid Kit

A first aid kit is very essential life saving accessory. The kit should contain the following items and should be inspected regularly for the expired medicines.







# What are the objectives of the task force?

- (1) To coordinate the first stage response by establishing contact with the control room, civil society and NGOs.
- (2) To organize fair and equitable distribution of assistance in terms of food, water, medicines, temporary shelters, blankets, household kits, candles, matches etc.

# Who forms the task force?

- (1) The task force comprises 3 to 7 members per village.
- (2) The task force should represent members of all communities, important and respected leaders of the village, women SHGs and the owner of fair price shops.

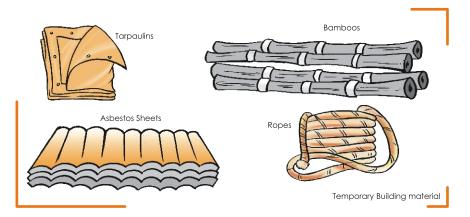
# What does the task force do?

#### Non Disaster Time

- (1) The task force will familiarize themselves with damage and needs assessment formats.
- (2) The task force will assess the estimated need of relief materials and accordingly maintain stock register and replenish as required.
- (3) The task force will mobilize from the donors, individual contributors and NGOs stock of food grains and medicines and store them in an identified central storage place.
- (4) The task force will stock food and medicines for animals, temporary building material such as ropes, bamboos, tarpaulins and asbestos sheets in safe shelter.
- (5) The task force will advise people to keep their important documents at a safe place.

#### Alert and Warning Stage

(1) The task force will coordinate with the shelter management task force to move stocks of food, and water to the safe shelter.



(2) The task force will move to the safe shelter.

#### **During Disaster**

- (1) Primarily remain in shelters depending upon the type of disaster.
- (2) Help the shelter management task force to organize and distribute rations to the evacuees.

#### **After Disaster**

- (1) The task force will conduct a complete damage and needs assessment.
- (2) Based on preliminary needs assessment, the task force shall prepare a checklist and communicate the same to the Panchayat Control Room. Checklist should have:
  - Estimate of the people affected and their demographic profile
  - Size, scope and likely duration of the distribution of the relief material
  - Local capacity and resource available and required
  - Needs of groups affected
  - Accessibility to the affected community
- (3) The task force will communicate the needs assessment findings and share with other task forces as well as local authorities and NGOs.
- (4) The task force will establish a distribution center and ensure equitable distribution of the rations without any discrimination and establish community kitchens.
- (5) The task force will try to distribute first to vulnerable groups like old, physically challenged, children and pregnant and lactating women.
- (6) The task force will maintain a list of households for assistance.
- (7) The task force will provide information on the quantity and type of ration to be distributed for each distribution cycle.

- (8) The task force will maintain inventory of stocks when external aid arrives.
- (9) The task force will coordinate with the communication task force in order to keep the community informed about the various government policies regarding assistance and relief.
- (10) The task force will organize a gram sabha (village meeting) to evaluate the experience, internalize learning to ensure accountability when relief phase is over.
- (11) The task force will move undistributed relief material to a safe place.
- (12) The task force shall adhere to the code of conduct during the entire process.

# Family Relief Kit







# What are the objectives of the task force?

To locate and rescue people who are physically trapped, distressed, challenged and old who are living in low lying areas, and on the coastal belts and to move them to safer places identified earlier.

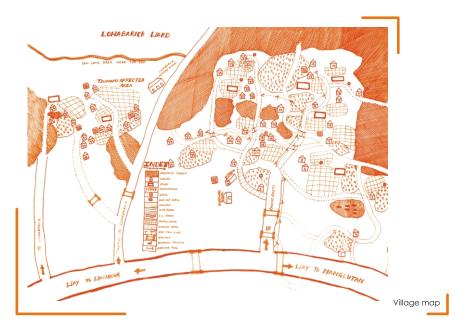
# Who forms the task force?

- (1) The task force comprises 3 to 7 members per village.
- (2) Young, mentally and physically strong men and women having skills of a driver, swimmer, cutter and climber. All the members should have minimum training of First Aid.
- (3) Members are trained on the methods of search and rescue.

# What does the task force do?

#### Non Disaster Time

- (1) The task force should get familiarized with the response mechanisms in existence of the government at all levels and ensure effective coordination.
- (2) The task force shall equip themselves with various tools and arrange to acquire from the local government and NGOs. These equipments should be kept at a designated place and maintained properly.
- (3) The task force shall have a detailed map of village indicating vulnerable areas, safer routes, low lying areas, safe evacuation centers and transport routes.
- (4) The task force will have back up teams and teams shall work in pairs.
- (5) The task force shall devise various strategies to search and rescue.



# Alert and Warning Stage

- (1) The task force will organize meeting of their members.
- (2) The task force will contact Pradhan/Patwari/Communication task force for detailed information.
- (3) The task force will make action plans for the areas which are vulnerable and requires help.
- (4) The task force will divide themselves as per the need and take the required equipments.
- (5) The task force will assist the evacuation team to move into safe shelter sites.
- (6) The task force will coordinate with the First Aid task force to give medical facilities to the injured.
- (7) The task force will move the seriously injured persons to PHCs/hospitals.

#### **During Disaster**

- (1) The task force will coordinate with the shelter management task force.
- (2) In case of fire the task force will assist the firemen in putting off fire and rescuing people trapped in fire.

3



#### After Disaster

(1) Before undertaking any search and rescue measure, the task force will assess the damage and make response based on the following criteria:

Degree of Damage & Risk	Should Intervention be attempted		
Heavy/High	No. Restrict the access to the structure		
Moderate/ Medium	Perform quick removals and provide treatment on site. Allow few rescuers.		
Light/Low	Locate the victims, check the breathing and prioritize the removal of the victims from the debris.		

- (2) The task force will maintain a list of rescued and missing persons.
- (3) The task force will conduct a physical search including a systematic movement across the site.
- (4) The task force will activate hazard specific rescue plans for different scenarios like:
  - Rescue victims under collapsed structure
  - Rescue victims stuck up in the building
  - Rescue victims trapped in fire
  - Rescue victims from road, or rail accident
- (5) The task force will communicate to the Patwari/Tehsildar/Pradhan for any additional manpower or equipments required.
- (6) The task force will coordinate with the evacuation and medical teams for providing medical treatments to the rescued in time.

- (7) The task force will coordinate with the sanitation teams to ensure that the dead bodies are identified and cremated.
- (8) The task force will also provide support to the firemen, home guards, police and other external agencies.
- (9) The task force will make available relief assistance: water, food, public information etc. to the evacuees in the shelters.
- (10) The task force will communicate the correct information of the rescued persons to the Tehsildar/Patwari/ Pradhan, control room and the community.

#### Search and Rescue

Search and rescue is the process of identifying the locations of disaster victims who may be trapped or isolated and bring them to safety. In the aftermath of floods, search and rescue usually includes locating stranded flood victims, who may be threatened by rising water, bringing them to safety or providing them with food and first aid until they can be evacuated or returned to their homes. In case of landslides and earthquakes, search and rescue focuses on people trapped or injured in collapsed buildings and debris.

# Search and rescue methods

If a victim cannot get out on his or her own, then apply the appropriate method depending on the situation and the number of rescuers.

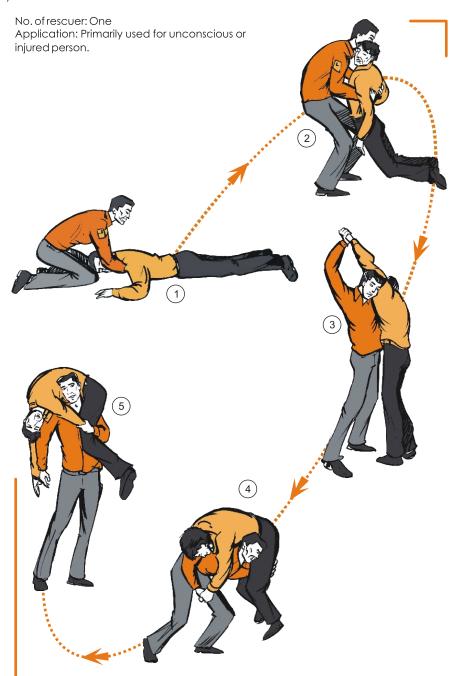
#### (1) Staircase Drag Method

No. of rescuer: One

Application: When the victim needs to be dragged along a staircase and the victim is heavier than rescuer.



# (2) Fireman Lift Method



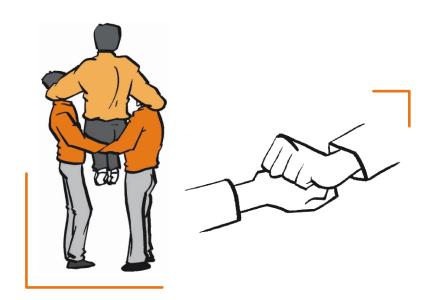
# (3) Fireman Crawl Method

No. of rescuer: One Application: When the victim is unconscious and is heavier than the rescuer.



# (4) Two Hand Seat Method

No. of rescuer: Two Application: When the victim is conscious but is unable to walk.



# (5) Three Hand Seat Method

No. of rescuer: Two

Application: Used when the rescuer need one hand to support an injured leg of a survivor.



# (6) Four Hand Seat Method

No. of rescuer: Two

Application: Used when a victim is conscious and is able to support himself with his arms.



#### (7) Pick a Back Method

No. of rescuer: One Application: Used when the victim is conscious but is unable to walk long distances.



# (8) Carry Chair Method

No. of rescuer: Two Application: Used to lift a victim with disability. It is also used to rescue old people.



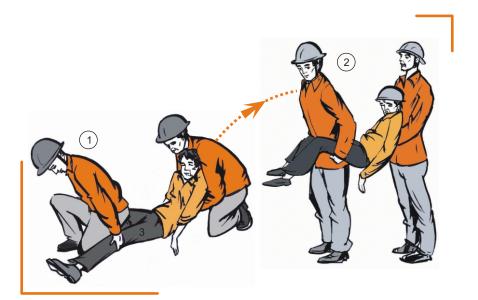
#### (9) Human Crutch Method

No. of rescuer: One Application: Used to move survivor with one leg injured.



#### (10) Fore and Aft Method

No. of rescuer: Two Application: Used to move unconscious victim or victim with injured abdomen.



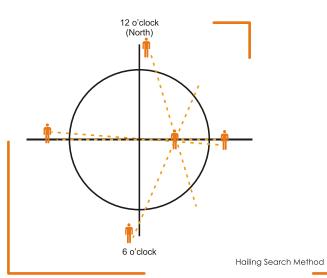
# **Hailing Search Method**

This physical search method is used in buildings that are dangerous to enter. In this method the leader signals to stop all activities around the area. Four team members form a cross pattern, spaced at intervals of approximately 8-16 meters, in safe locations as close as possible around the search area (refer diagram). Going "around the clock", each rescuer hails out loudly or with a megaphone, the following instructions "if you can hear me call out for help" to elicit a response from a trapped person.

All the rescuers then listen and point in the direction of any potential response to the instruction. If more than one rescuer hear any response, the direction in which they point will triangulate on the source of the sound of the victim. This is then marked on the rough sketch of the area available with each rescuer.

# Advantages of Hailing Search

- (1) Readily available resources.
- (2) Capable of quickly covering large areas.
- (3) No requirement of specific equipments.
- (4) Volunteers can be quickly trained to support the effort.
- (5) Can be employed both during day and night time.
- (6) High probability of victim location.

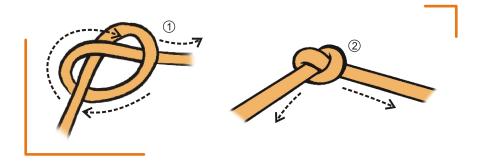


# **Ropes and Knots**

Rope is an important part of search and rescue. It can act as a guideline during searching and can be used to lift equipments during rescue work. Different kinds of knots with illustrations are mentioned below:

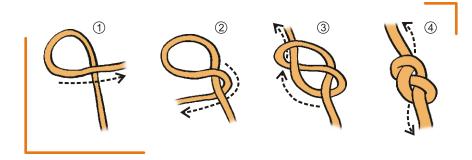
#### (1) Overhand knot or Thumb knot:

It is used as a stopper knot. Sometimes it is also known as first aid knot because it is used to tie the bandage.



# (2) Figure of Eight:

It is used to stop a line running through a sheave.



# (3) Cat's paw:

It can be used to hoist a hose or like object.

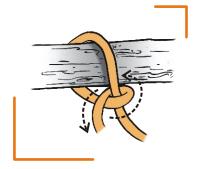


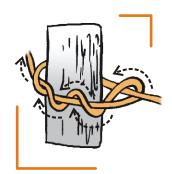
#### (4) Half Hitch:

It is used to hoist round object.

# (5) Timber Hitch:

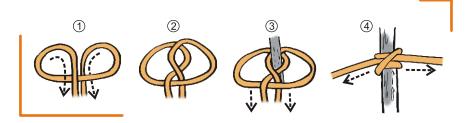
It is a simple knot with several loops on it, which is used to hoist any odd heavy object.





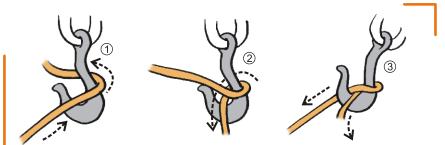
# (6) Clove Hitch:

It is used to secure a line to round object.



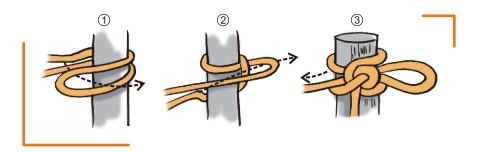
# (7) Black Wall Hitch:

It is used to secure a line to shank of the hook.



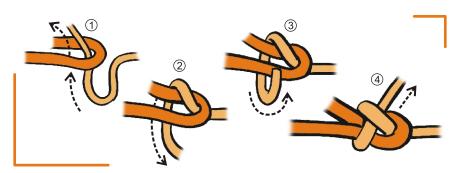
#### (8) Draw Hitch:

It is used as a temporary fastening when we require the knot to be released immediately.



# (9) Single Sheet Bend:

It is used to join two ropes of different thickness.



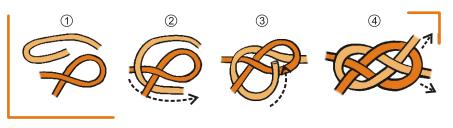
# (10) Double Sheet Bend:

It is similar to single sheet bend but with a double hitch round. It is used when the ropes are markedly different in thickness.



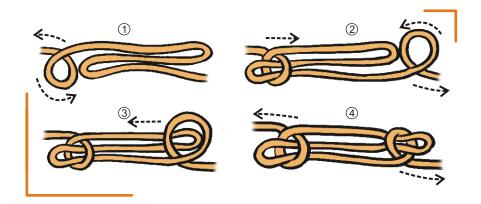
#### (11) Carrick Bend:

It is used to join two lines without the knot forming an obstruction to pass rounds an object.



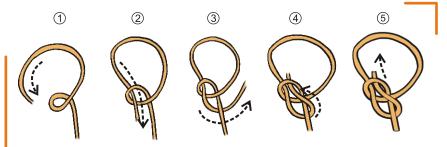
# (12) Sheep Shank:

It is used to shorten the length of a line or to avoid the damage part of line.



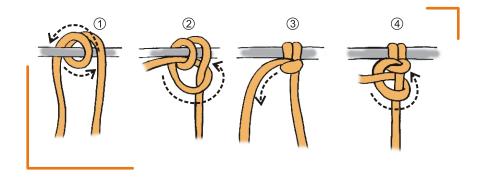
# (13) Single Bowline:

It is used for various purposes.



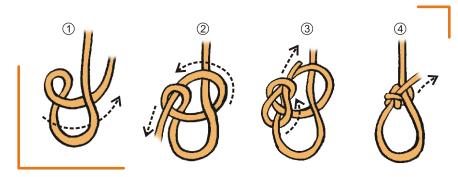
# (14) Anchor Bend:

It is used for attaching a rope to a ring or similar termination.



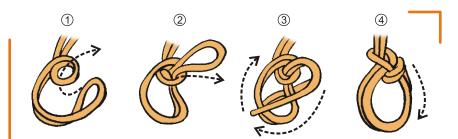
# (15) Running Bowline:

Consist of a bowline, with the standing line passing through the bight of the line, to form a running noose.



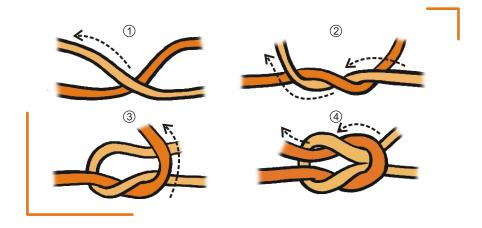
# (16) **Bowline on bight**:

It is used to lower a stretcher or unconscious person.



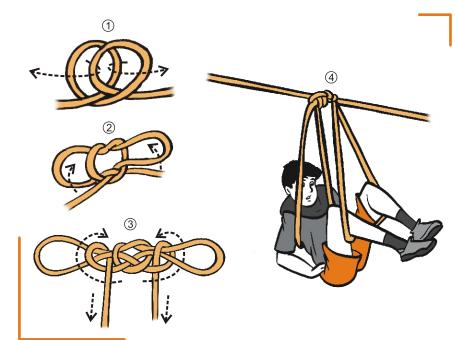
# (17) Reef Knot:

It is used to join two ropes of same diameter or thickness.



# (18) Chair Knot:

It is used to lower an unconscious casualty.



# Search and Rescue Kit





