



# **Training material**

## **DISASTER PREPAREDNESS FOR**

### **HOUSEHOLDS**

**(For internal use only)**



Hue, August 2012

## **Foreword**

The training material “Disaster Preparedness for Households” is developed by German Red Cross officers in Hue and Hue Chapter officers to support the training activity on Disaster preparedness for households in the Integrated Disaster Preparedness Project funded by Federal Foreign Office of Germany and German Red Cross through Vietnam Red Cross Society implemented in Thua Thien Hue province. This training material is also revised by VNRC HQ officers.

The Integrated Disaster Preparedness Project funded by Federal Foreign Office of Germany and German Red Cross through Vietnam Red Cross Society implemented in 06 communes/wards in Thua Thien Hue province, including: Phong Thu, Phong An (Phong Dien district), Thuy Tan, Thuy Thanh (Huong Thuy town); Thuy Bieu, Huong So (Hue city).

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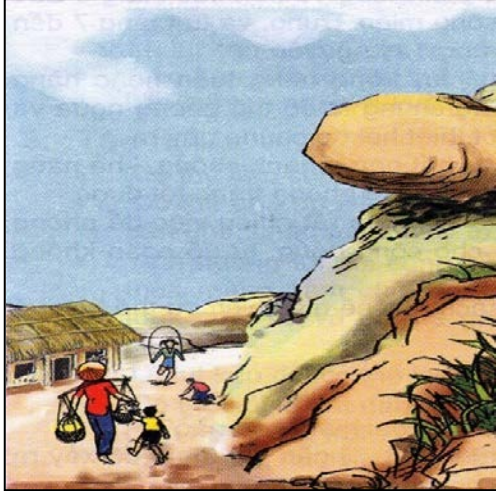
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## LESSON 1: HAZARD, DISASTER

### 1. Hazard, disaster

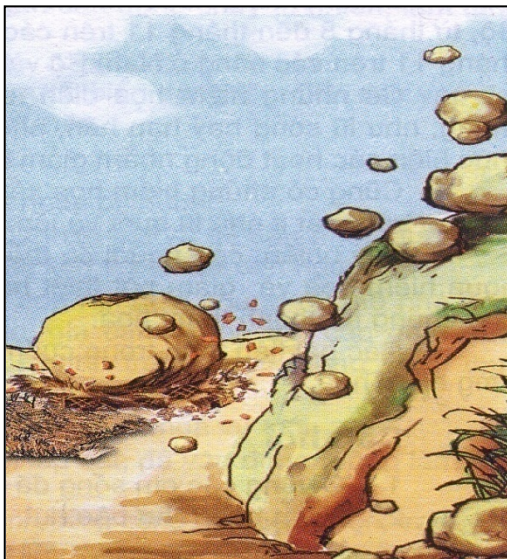
#### 1.1 Hazard:



A hazard is a (*natural or man-made*) phenomenon that has a potential to threaten people's lives, their property, and livelihoods, cause social and economic disruption, or environmental damage

*Ex: Storm, tropical low depression, flood, typhoon, ect.*

#### 1.2. Disaster:



\* A hazard becomes a disaster when it happens where many people are living or have their livelihoods and causes damage to them and their property.

*For example,* during a flood many people are drown or injured, lose their animals and their property

### 2. Types of hazards in Thua Thien Hue

#### 2.1. Tropical low-depressions and typhoon:

##### 2.1.1. Tropical low-depression:

Tropical low-depression is a tropical cyclone with the strongest wind speed from force 6 to force 7, maybe including shock.

### **2.1.2. Storm:**

Storm is a tropical cyclone with the wind speed from force 8 above and maybe including shock

Nowadays, according to the Beaufort Scale, storm with Force 13 to 17 have been added.

- Wind speed reaches Force 10 - Force 11, it is called strong storm
- Force 12 or above, it is called typhoon
- Storm is coming when the storm center is in land.
- That storm abated means it turned into the low pressure area; the wind speed is under Force 6.

### **\*Tropical cyclone:**

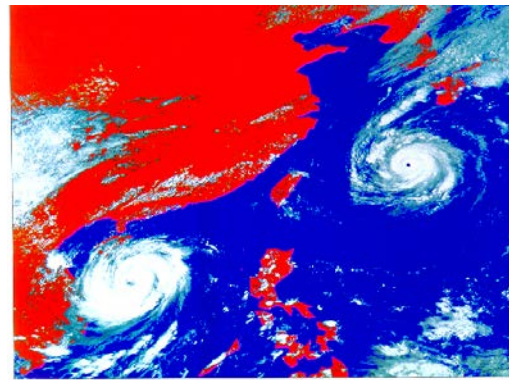
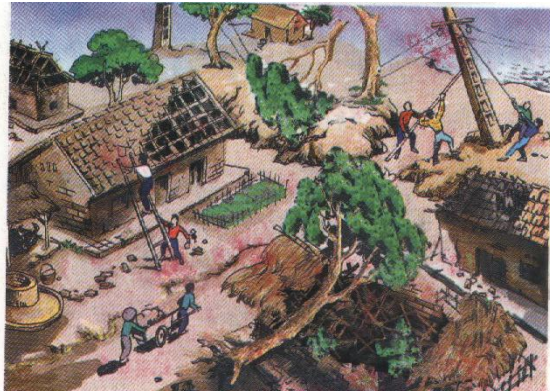
*Tropical cyclone locates in the area of cyclone with the diameter of hundreds of meter and is created in tropical sea. It moves into the center in the anti-clockwise direction, with the atmospheric pressure is normally below the surrounding area; it goes with rains, and sometimes with storm, cyclone.*






### **Effects:**







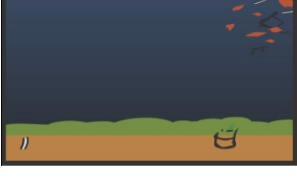
- People can be injured or killed, majority are women and children
- Livestock may be killed
- Ships and boats may be sunk
- Houses and trees can be damaged
- Destroy the public structures, infrastructure
- Power lines can be damage, communication lines can be cut
- Storm surges push seawater onto the land causing saltwater intrusion that affects agriculture, fish, shrimp and crab production
- Crops can be damaged or destroyed and food stocks lost



- Heavy rainfall may cause floods and landslides.



Storm force	Symbol description	Storm intensity (km/h)	Signs in land	Things households should do
1		1-5	The movement of wind can be seen through smoke	<b>Low risk</b> <b>➔</b> Listen to the local radio and TV to update information about capacity and location of storm.
2		6-11	One can feel wind on the skin. Leaves keep moving	
3		12-19	Leaves and small branches move in the direction of the wind	
4		20-28	Dust and paper blow. The small branches move.	<b>Average risk</b> <b>➔</b> Continue to listen to the local radio and TV to update information about capacity and location of storm.
5		29-38	Small trees move	

6		39-49	Big branches move. Difficult to use umbrellas.	High risk ➔ Collect property, round up the cattle to the higher areas
7		50-61	Dust and paper blow. The small branches move.	Higher risk ➔ Prepare for evacuating to safe areas
8		62-74	Small branches break/ collapse	The very high risk ➔ Evacuate to safe areas in case the house is not strong
9		75-88	Some buildings are damaged.	The highest risk ➔ Still stay in the evacuation shelter till the storm become weaker
10		89-102	Trees are broken down. Some buildings are partly damaged	
11		103-117	Many buildings are damaged.	
12		118-133	Many buildings are seriously damaged	

## 2.2. Flood:

**Flood** happens when the water level and speed of rivers and springs exceeds the norm

**Inundation** is an overflow of water that submerges land, affect the production, and living

**Causes:**

- Long-lasting and heavy rains can cause floods
- Construction works such as roads, railways and irrigation systems can also cause flooding by preventing the natural flow of water to the sea
- Floods can also happen when dykes, dams or embankments break
- Big storms may cause the rising in sea level, and also goes with rains

**Effects:**

- Result in injury or death to people
- Damage houses and property and important possessions, most of the victim are the households whose head of the house is woman
- Affect people's livelihoods because they destroy crops, kill livestock leads and can cause food shortages
- Long lasting floods can delay the planting of new crops
- Can cause soil erosion or cover the land with sand or stones, which reduces farming area
- Can damage facilities such as hospitals, clinics, schools, roads, railways, telephone and electricity lines
- Pollute environment
- Can stop people's daily activities.
- Can disrupt clean water supplies and can contaminate water sources, which could cause diseases



Floods sometimes are beneficial; for example, they replenish the nutrients in the soil  
*However, flood sometimes brings some advantages for human: such as alluvium stilt, fertilize for land.*

**There are three main types of floods:**

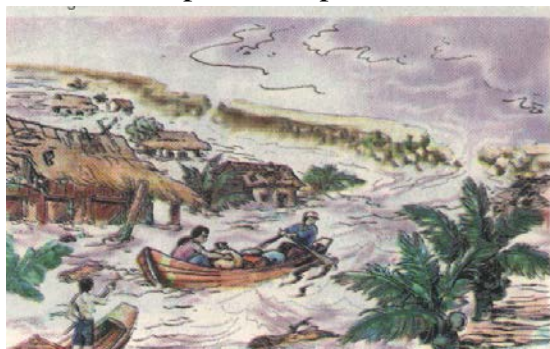
**\* Flash flood:**

- Often happen in the small rivers or streams in the mountainous areas
- Are usually the result of very heavy rains in sloping areas where trees and plants have been destroyed and water cannot be absorbed into the soil
- Happen quickly and consist of rapid flowing water and it is difficult to determine where they occur
- Can also happen when reservoirs or dams are broken



**River flood:**

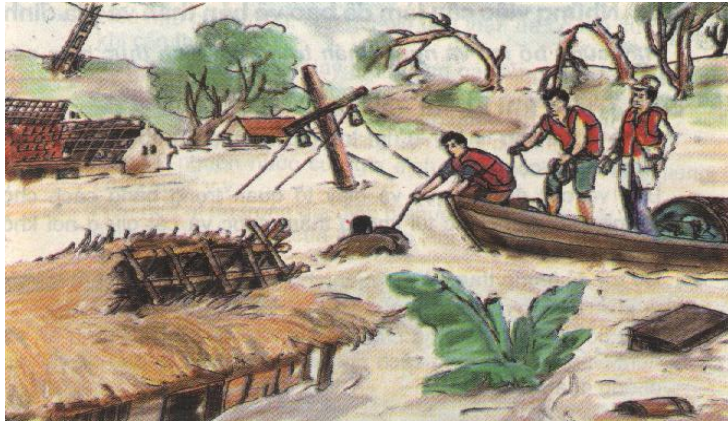
- Are characterized by river water flowing faster and at a higher level than normal.
- Are usually caused by heavy rains upstream.
- Influenced by storms or tropical low pressure



***Coastal flood:***

- Occur when storm surges or sea waves arise suddenly in combination with high tides.

- Coastal floods often occur at the same time as low-pressure storms or typhoons near the shore



### **The flood warning level of the gauging stations in Thua Thien Hue**

<b>Level</b>	<b>Kim Long</b>	<b>Phu Oc</b>	<b>Thuong Nhat</b>	<b>Van Trinh</b>
<b><i>Level 1</i></b>	<b>1</b>	<b>1,5</b>	<b>59</b>	<b>0,7</b>
<b><i>Level 2</i></b>	<b>2</b>	<b>3</b>	<b>62</b>	<b>1,2</b>
<b><i>Level 3</i></b>	<b>3,5</b>	<b>4,5</b>	<b>64</b>	<b>2</b>

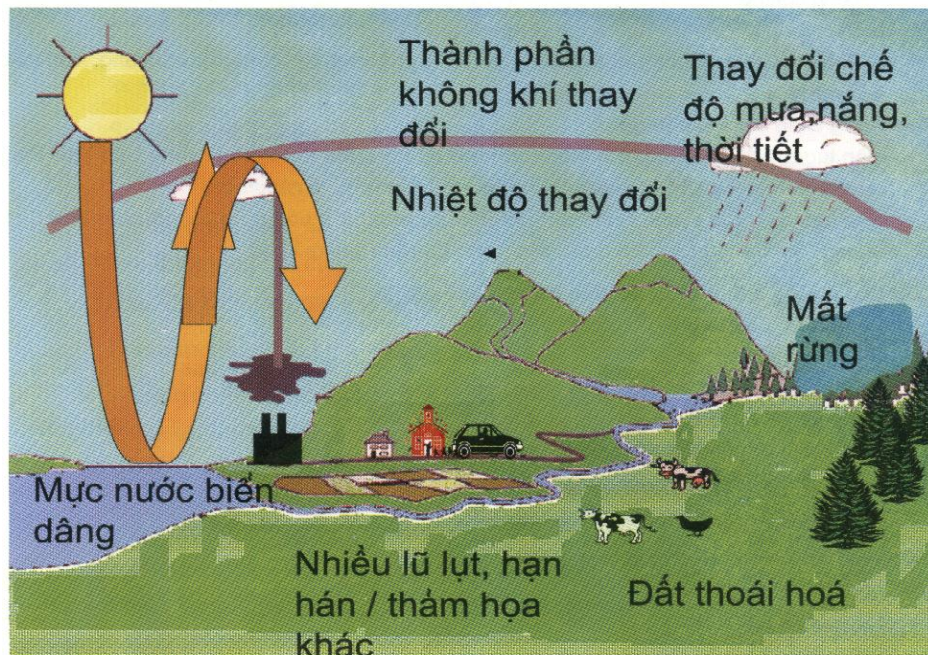
## LESSON 2: CLIMATE CHANGE

### 1. Climate change:

**Weather:** is the atmospheric state at the specific point that is determined by the combination of the elements of temperature, pressure, humidity, wind speed, rain, etc. Weather always changes.

**Climate:** is the average level of weather in one specific location and in a long time (about 30 years). Climate is temporary stable.

**Climate change** is the change of climate state comparing to the normal climate that happen in a long time, maybe warmer or colder. Climate change can be caused by the natural process or external impacts or human activities.



### 2. The expressions of climate change

- Average temperature is increasing
- Ice in the poles is melting with the speed faster and faster
- The sea level increases due to the heat broad process of water and ice melting (in the two poles and high peaks)

- Natural disaster and extreme weather phenomena (hot, cold, storm or flood, ect) tends to increase, both in frequency and intensity, and unpredictable

### **3. What does climate change affect us?**

In addition to the consequences outlined above, climate change also brings problems such as:

- Affect to the human health: making condition for diseases and ...
- Affect to agriculture, forestry, aquaculture: some species of animals or plants will be extinct due to the consequences of climate change
- Lead to the insecure in community: loss in houses, shortage of food supply, clean water, which can cause the big insecure in society such as migration or war, ect.

#### ***The relationship between climate change and disaster preparedness:***

- Disaster frequency increases.
- Hazards are complicated and unpredictable
- Damage due to disaster increases
- Influential area is bigger and bigger
- Time of the hazard occurring change

### **4. what should we do to respond to climate change?**

#### ***In family***

- Use the natural light in day time and use the energy saving bulbs in houses
- Only turn on the hot water tank in sustenance (7-10 minutes)
- Disconnect the power plug and turn off the light when not in use or out of house (light bulbs, TV, lamp, fan), save electricity and increase the equipment life expectancy.
- Use air conditioner in the temperature of 26 or above.

- Make your house clean and green. Limit to use chemicals due to their harmfulness to health and environment.
- Eat more vegetable, it's good for health and limit the greenhouse gas emission.
- Limit to throwing the waste because litter will eliminate methanol when melting, use the stable devices, and rank the reusable equipments. The organic waste can be used as fertilizer.

#### *On the street*

- Go on foot or by bicycle to the near place, save the energy and limit the pollutant smoke.
- Go together with friends, colleagues if possible. Save money and funny.
- Turn off the energy when stop in red traffic light in case the time is over 30 seconds

#### *At school*

- Decrease the amount of used paper, use the one-side paper as rough paper
- Make the sign board to remind people to save water and electricity in the toilets, classrooms and school

#### *In the market*

- Limit the plastic bags
- Select the energy saving product
- Select the local product because the good transportation will cost fuel, thus eliminate more green house gas

#### *In community*

- Plant trees to protect forest and sea
- Communication – education: sharing knowledge and information to neighbors and friends



- Volunteer activity: contribute the knowledge and skill to the environmental protection activities

## LESSON 3: DISASTER RISK MANAGEMENT IN HOUSEHOLDS

### 1. What is disaster risk?

*Is the potential loss caused by the specific hazard?*

Example: the house's roof can be blown up when storm happens

### 2. What should be done before, during and after disaster

The households will limit the risk in disaster only if there is a careful preparation.

The initiative things for the disaster preparedness response in households:

- Learn about the hazards in local area and information on disaster preparedness (who is responsible for the storm and flood preparedness, evacuation place, evacuation means of transportation, the nearest health station, persons who will give help in dangerous situations, the telephone number can be contacted in emergency, ect)
- Discuss with other members in family the response for each kind of disaster and make the disaster preparedness plan

In this document we introduce the things should be done before, during and after storm and flood because they are the common hazards in Thua Thien Hue.

### THINGS THAT SHOULD BE DONE BEFORE, DURING AND AFTER STORM AND FLOOD IN HOUSEHOLDS

Phase	Things that should be done
<i>Before</i>	<ol style="list-style-type: none"><li>1. Participate in training: first aid, search and rescue, disaster management plan in households, house retrofitting, ect for the better respond to disaster</li><li>2. Coordinate with local authority staff on making the disaster risk assessment to initially make the response plan.</li><li>3. Actively reserve food, drink, oil lamp, candle, flash light, batteries, ect in storm and rainy season.</li></ol>

	<ol style="list-style-type: none"> <li>4. Recheck the house and reinforce the unstable parts</li> <li>5. Prepare the equipments for disaster response like boats, life vest, life buoy, first aid kit, rope, ect</li> <li>6. Regularly listen to the TV, radio or public loudspeakers for flood warnings</li> <li>7. Harvest crop and other agricultural product in the low areas as soon as possible</li> <li>8. Evacuate residents, property, castle to the safety shelter when receiving the notification and instruction of local authority</li> <li>9. In case of evacuation, clothes, first aid equipments, flash light, candle, radio, batteries and food and drink should be prepared.</li> <li>10. Move the chemicals, pesticide to the high and safe areas to prevent the risk of poisoning</li> <li>11. Keep the important things in the high and safe place.</li> </ol>
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<p><i>During</i></p>	<p>12. Avoid going out in storm. Stay far way from windows or doors to prevent danger</p> <p>13. Find ways to update information about storm or flood</p> <p>14. Avoid children playing in flood to prevent diseases or dangers from flood</p> <p>15. Tightly cover the well, water containers to prevent flooding</p> <p>16. Cover tightly the latrines so that the substances is not overflowed</p> <p>17. In case no electricity; switch off all the electric devices for safety.</p> <p>18. Avoid walk over the flood to prevent dangers from electricity or diseases</p> <p>19. Manage the water by Chloramines B or boil in 10 minutes to avoid diarrhea</p> <p>20. Provide first aid for the injured when there is no support/interference of health staff</p>
<p><i>After</i></p>	<p>21. Maintain to update weather forecast news from radio, TV, ensure that the habitat is safe enough to come back home</p> <p>22. If the house was destroyed by storm, ensure to enter in case the safety (house is repaired)</p> <p>23. Tidy house, streets, dredge the sewerage to prevent diseases such as diarrhea, malaria, red eyes diseases, foot disease</p> <p>24. Use rubber boots, glover, comforters when cleaning to prevent germs and broken pieces</p> <p>25. Treat the waste, dead castle and water source to prevent concerning diseases</p> <p>26. Watch out for snakes or other dangerous animals as these will also move</p>

	<p>to the higher ground in storm or flood</p> <p>27. Do not use dirty water to wash dishes, brush teeth, cooking or wash hand</p> <p>28. Inform the local authority about the damage of electric wire system or electric poles, broken down trees for their treatment</p> <p>29. Throw the food that was soaked in floodwater</p> <p>30. Support people to overcome the consequences of disaster</p>
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## LESSON 4: DISASTER RISK MANAGEMENT PLAN IN HOUSEHOLDS


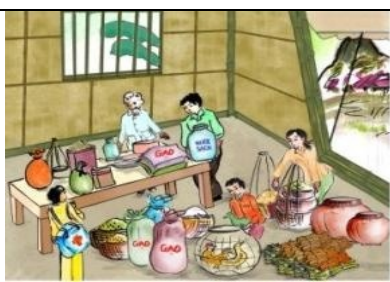
### 1. What are 4 on-the-spot motto?

- Leadership on-the-spot
- Human resources on-the-spot
- Materials on-the-spot
- Logistics on-the-spot

Besides applying for local authority, the 4 on-the-spot motto can be applied for households

### 2. 4 on-the- spot motto applied for households

Leadership on-the-spot	
<p>Before disasters occur, the head of each household should anticipate disaster issues which could affect his/her family;</p> <p>Check and make an inventory of the essential means, materials, and household items which are available or which need to be brought.</p> <p>Assign preparedness tasks and duties to each family member.</p> <p>During the disaster, the household leader should the family's response by, for example, undertaking rescue work or providing emergency relief support to family members.</p>	 <p>The illustration shows a group of people gathered outdoors for a community meeting. A banner in the background reads 'ỦY BAN NHÂN DÂN NGUYỄN'. Below the illustration, there is a quote in Vietnamese: '“Phối hợp các ban ngành đoàn thể” liên kế hoạch phòng chống lụt bão - T. K. C. N”'.</p>
Human resources on-the-spot	
<p>Human resources at the household level are household members who are key laborers, are healthy and active, who can take a role in response, search, and rescue to ensure the safety family members and are ready to support the local authorities when required.</p>	 <p>The illustration depicts several household members engaged in disaster response activities. One person is climbing a ladder to work on a roof, while others are on the ground, some carrying supplies and others observing. The scene is set in a rural area with traditional houses and palm trees.</p>

Materials on-the-spot	
Each household should prepare adequate means for self rescue and self evacuation, such as boats, rafts, floating devices etc., along with safety measures such as life-jackets, temporary shelters etc	
Logistics on-the-spot	
Each household should prepare adequate quantities of essential items such as food, medicine, clean water and lamp oil for family's use as long as possible (quantity sufficient to last the period of flooding) or at least sufficient to last until external relief arrives.	

### 3. The important steps to make the disaster management plan in households

#### 3.1. Figure out information

Contact with committee for storm and flood control to find information

- Disaster or emergency situation often occur in local area
- How warnings are informed
- How to prepare for each kind of disaster

#### 3.2. Discuss and make disaster management plan for households

- Discuss the kind of disaster can occur
  - + Explain the way to prepare and respond
  - + Discuss what should be done in case of evacuation

- Practice what discussed
- Instruct the focal point in family cut off electricity, water, gas safely

**3.3. *Make the plan how to keep in touch with other members in family if being separated in disaster***

Select 02 meeting places:

- The safe shelter near your house in case of fire
- A place out of residential unit/hamlet in case you cannot go back home
- Choose the relative's house in other place to be the place people can contact

**3.4. *Save the emergency telephone number in each member 's phone***

## TEMPLATE OF DISASTER RISK MANAGEMENT PLAN IN HOUSEHOLDS

### DISASTER PREPAREDNESS PLAN

Year 2012

Name of household: ..... Number of family member: .....  
(The elderly, children, pregnant/breeding, the sick, the disable, ect who need special help)

Hamlet: .....Commune: .....

District: .....Province: .....

#### **Important information:**

##### 1. Evacuation situation

No	Place to evacuate	Evacuation route/ road	Remark
	Evacuation place in storm		
	Evacuation place in small flood		
	Evacuation place in big flood		
	Emergency situation...		

##### 2. Important telephone numbers

No	Name – position	Name	Telephone number
	Head of hamlet		
	Leader of CFSC		
	Commune/ward police		
	Hamlet health worker		
	Commune Health station		
	Relatives to contact in case of being separated		

##### 3. List of things should be prepared before storm and rainy season

No	Thing to be prepared	Quantity	Focal point


Kind of disaster	Action	Time	Who	Available things	Remark
Storm	<b><u>Before</u></b>				
	1. House retrofitting	August	Father + 2 sons	Bamboo, sand bag, ladder	Buy more rope
	2.				
	3				
	<b><u>During</u></b>				
	1. Do not go out in storm	In storm	Whole family		Prepare food for family
	<b><u>After</u></b>				
	1. Tidy the trees around house	Storm abated	Father, mother and son	Gloves, hook, saw	
Flood					

....., day month year 2011

**Head of household**



## LESSON 5: EVACUATION AND THINGS TO DO WHEN EVACUATION

### 1. What is evacuation?

Evacuation is the **immediate measure that is implemented when storm/flood threaten to destroy a particular area and seriously affect this area.** Evacuation is **the first choice of authority to ensure the life safety and property for people.**



### 2. Kind of evacuation

Self evacuation

Concentrative evacuation under demand of local authority (according to local plan)

### 3. Criteria to select the evacuation place

- Community is the best decision for the safe evacuation place. The places often used for evacuation are: schools, people Committee, health station, pagodas,

churches and strong houses. However, it is necessary to check the safety of construction based on its location and current situation.

- **The evacuation place can be seen as “safe place” if:**

- Built in high area
- Far from slope mountain or coastal,
- Far from river or dykes
- Easy to approach road system
- Have clean water and latrine system

**Note:**

- In concentrative evacuation, the management and support the people must be ensured
- Local authority and households must determine the suitable time to evacuate safely

#### **4. Requirements for households in evacuation**

- Share with other members and neighbors on evacuation plan
- Plan how to keep in touch if being separated
- Learn about safe routes recommended by local authority
- Master the evacuation place and supporting means of transportation
- Evacuate in calm and order
- Ensure safety in evacuation to prevent loss and damage when evacuation
- Preferential for the elderly, children, the disable, pregnant, the sick in emergency situation
- Share food to overcome storm and flood
- Make sure water clean and hygiene while evacuation

#### **WHAT SHOULD BE BROUGHT WHILE EVACUATION**

- First aid kit and some basic medicine (cotton, tape, anti-diarrheal drug, fever drug, medicine oil, ect
- Food for children, the elderly, the sick. Should choose the un-rotten food; keep in long tie and no need to cook.

- Drink (if the evacuation place has no clean water). The normal person needs at least two liter of water per day. In evacuation, each person needs to reserve about 4 liter of water per day to drink and personal hygiene. Water should be kept in plastic tanks, bottles, avoid kept in fragile things. Boiling or using filter candle to ensure the clean and safe water
- Kitchen equipments: knife, glass, plastic dish and bowl, ingredients, ect
- Flash light, battery, mobile phone if any, radio, ect
- Blanket, sleeping mat, underwear, ect
- Important documents such as ID, birth certificate, red document and other precious property. These documents should be kept in plastic bag to avoid wet or broken during evacuation

Moreover, there are maybe some people needing the special support such as pregnant, children, the elderly, the sick. Need to prepare the special equipments or food for those people.

***Note:** when receiving the warning of evacuation from local authority, immediately evacuate under the instruction of authority*

***Template: List of things should be brought when evacuating***

No	Thing to be prepared	Quantity	Focal point	Remark

## LESSON 6: GUIDANCE FOR SAFE HOUSE RETROFITTING IN STORMY AND RAINY SEASON

### 1. Purposes:

Limit to the minimum the damage of property caused by storm and flood

### 2. Principles:

- Protect themselves and other people
- Equip enough personal safety equipments
- Need the support from others
- Prepare enough equipments
- Cut off interrupter before retrofitting
- House retrofitting before storm comes

### 3. Necessary things to do house retrofitting

- Bamboo, or other trees replacing bamboo : 10-12 plants
- Sand bags (soil) from 12 to 20 bags.
- Ladder: 02
- Pincer, hammer, hook, shovel, hoe, ect
- Bolt 5 centimeter, 10 centimeter, steel wire (rattan rope, nylon rope, ect)
- Stakes

### 4. Personal safety equipments

- Helmet
- Cotton gloves
- Set of raincoat
- ....

### 5. Steps for house retrofitting

**Step 1:** Prepare the required tools as shown in Part 4.

**Step 2:** Two people on the roof, one person on the ground to load the bamboo up then tie two bamboos together in V-shape along the roof. Make from 03 to 04 V-shape bamboo frames for each house according

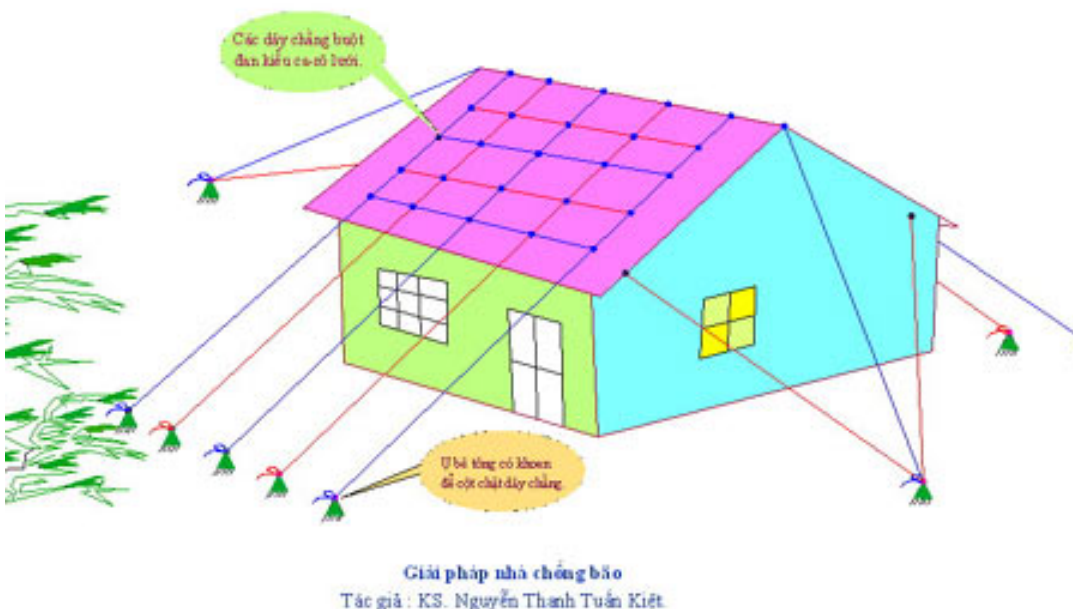


to the area of the roof. Next, put 02 bamboos horizontally on the front roof and 02 on the back roof. Tie them to the bamboo frames and make sure that the whole system is steady.

**Step 3:** Move sand bags up the roof and weight them over the bamboos, the mouths of the bags must be tied by steel wire so that they can be easily tied to the bamboos after being put on the roof.

**Step 4:** Tie the bamboos from the roof down to suitable positions on the ground so that the installment is fixed under stormy condition.

**Step 5:** Check the safety of the wires used to attach the bamboos to the ground, make sure they are strained and not loose.



**\* Caution:**

+ Use medium sand bags, not big ones.





- + not use bricks, construction tiles or big rocks in the place of sand bags because they can be dangerous to human lives and properties when blown away during storms.
- + The angle made by the attachment wire from the stake (on the ground) to the roof should be 45 degree.



## LESSON 7: LIGHT FIRST AID AND SEARCH AND RESCUE IN DISASTER

### 1. First aid

#### What is first aid?

The provision of initial care for an ill or injured person right on the scene until professional care arrives

#### Objectives of First aid

- Reduce the death
- Limit the additional injuries
- Make condition for the recovery of victim

#### the steps should be followed:

- Scene size – up: observe, collect information, and determine the safe approach
- Call for help
- Patient Assessment
- First aid, support
- Safely move patients to the nearest health station.

### 2. Some skills on light first aid

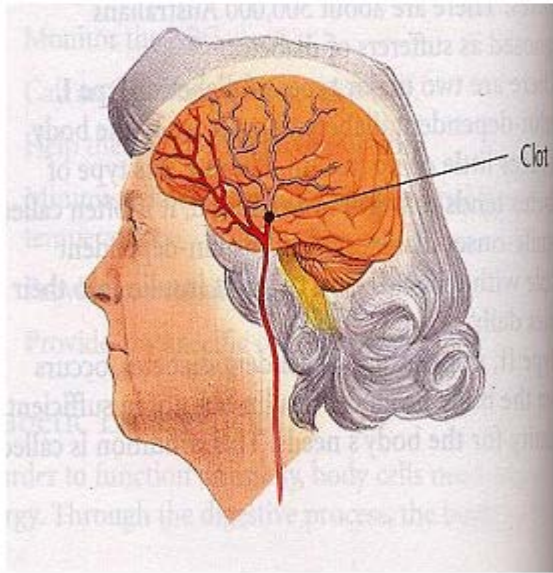
#### A. CONTROLLING BLEEDING

##### *Signs and symptoms*



##### **1. External bleeding:**

- Skin broke
- Blood from the injury bleeding
- Signs of body: sweat, cold, pale, ect



## 2. Internal bleeding:

occurs when there is a rupture of an artery, vein or capillaries within the body, thus it cannot be seen directly.

Indicators of internal bleeding:

- Pain in the injured part
- Sweat, cold, pale, thirsty
- Shock, dizzy due to bleeding
- Blood or fluid in the nose, mouth, ears, vagina, ect.
- Blood in vomit, urine, feces, ect

### *Causes*



Caused by labor accident, traffic accident, accidents in daily life, ect, cut by the sharp objects, soft parts; the broken bone open through the skin that cause bleeding, cut blood vessel, hurt the organs and lead to internal bleeding.

### *Risk*



- uncontrolled bleeding leads to dizzy/shock.
- Unconscious and die.

### *Treatment*



## 1. External bleeding:

### *a. Severe bleeding wound without object:*

- Avoid coming in contact with blood, use synthetic gloves or nylon instead
- Place direct pressure over the wound by putting a clean dressing over the wound and pressing firmly.
- Maintain pressure on the dressing over the wound by wrapping firmly with a Pressure bandage
- Elevate their legs, keep victim warm to avoid dizzy
- Lie the person down to help reduce blood flow at the wound site.
- Check the tips of limbs after bandage.
- If blood seeps through the dressing put a second padding on top of the first and re apply direct pressure.

### *b. Severe bleeding wound with embedded object:*

- Do not remove object
- Use gloves
- Apply direct pressure on the wound
- Use a dressing pad around the object and bandage it (do not cover the object)
- Mobilize victim to the nearest health station





Hình a



Hình b



Hình c

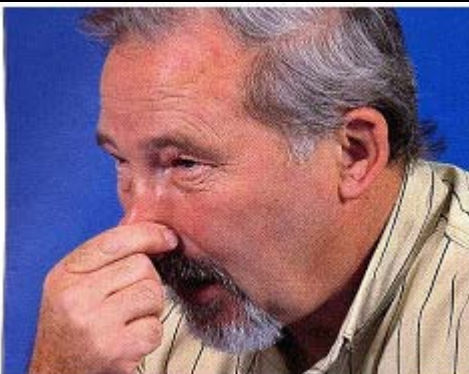


Hình d



## 2. *Internal bleeding:*

- Place the person with head lower,
- Keep person warm
- Mobilize victim to the nearest health station.



## 3. **Nosebleed:**

- Help victim sit up to front,
- Use 2 fingers to hold the nose about 10 minutes, request victim to breathe with mouth.
- After 10 minutes if still bleeding, move victim to health station.

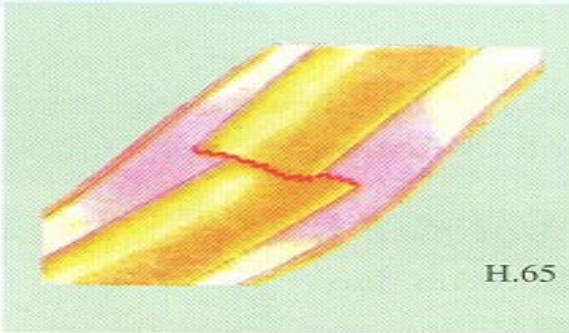
## **Preventive measures**

- Safety in working and living

- Do not let children play with sharp objects

## B. FRACTURES

### *Signs and symptoms*




- 1. Closed fracture:** is a broken bone with no disruption in the continuity of the skin.
- Pain at injury site, Severe pain at injury point, sharp pain when the individual attempts to move the part.
  - Deformity like abnormal twist of limb
  - restricted or loss in use, abnormal move.
  - Bruise and swelling at the site of the injured



- 2. Open fracture** is an injury where a broken bone is open through the skin
- Besides symptoms above, it is also including:
  - Broken skin, bleeding
  - Protruding bone.

- 3. Sprain:**
- Pain, restricted in use
  - Swelling
  - Bruise
  - Non-displaced

	<p><b>4. Dislocation:</b></p> <ul style="list-style-type: none"> <li>- Pain, loss of use</li> <li>- Swelling</li> <li>- Bruise</li> </ul>
<p><b>Risk</b></p>	
	<ul style="list-style-type: none"> <li>- The broken bone hurt the muscle, nerve, blood vessel and turn the closed fracture into open fracture,</li> <li>- Victim suffers severe pain, bleeding, maybe dizzy, and unconscious and leads to disable, or death.</li> <li>- Open fracture has the risk of infection</li> </ul>
<p><b>Treatment</b></p>	
<p><b>I. Regulations for fracture treatment:</b></p> <ul style="list-style-type: none"> <li>- Remain the injured site, Don't try to straighten or reposition the fractured limb</li> <li>- Immobilize the joints above and below any fracture</li> <li>- In case fracture enclosed with soft part injure or blood vessel injure, it is needed to first aid before applying splint or sling to fix the bone</li> <li>- In case the open fracture, turn it into the closed one and provide first aid as closed fracture.</li> </ul> <p><b>II. Treatment of some fracture cases:</b></p> <p><b>1. Broken forearm:</b></p> <p>a. Prepare:</p> <ul style="list-style-type: none"> <li>- 2 splints, its length from over elbow to hand,</li> <li>- 4 bands,</li> </ul>	



- 2 triangular bandages,
  - Cotton, cloth,
- b. Carry out:
- The victim sits on the ground (the most convenient position)
  - Victim holds the broken part
  - Place 2 splints and buffer with the forearm
  - Fix the forearm with the splints, bands at above and under the broken part and 2 points of splints
  - Use 2 triangular bandages to tie and fix the arm to the body.



Hình a



Hình b



Hình c

## 2. *Broken arm*

- a. Prepare:
- 2 splints: the outside splint with its length from over shoulder to elbow, the inside one is from arm pit to elbow
  - 4 bands
  - 2 triangular bandages
  - Cotton, cloth ...
- b. Carry out:
- The victim sits on the ground (the most convenient position)
  - Victim holds the broken part
  - Place 1 splint in and another out of the broken arm and place buffer
  - Fix the arm with the splints, bands at above and under the broken part, close to the armpit and elbow.



- Use 2 triangular bandages to tie and fix the arm to the body.



Hình a



Hình b



Hình c

### 3. *Broken leg:*

#### a. Prepare:

- 2 splints: with its length from ankle to the middle part of the thighbone, its width as  $\frac{2}{3}$  of limb width
- 6 bands,
- Cotton, cloth,

#### b. Carry out:

- Victim lays on the ground
- Pass the bands through: 3 in ankle, 3 in ham
- Arrange bands:
  - 2 bands above and below the broken part
  - 2 bans in 2 side of splints
  - 2 bands at the ankle and knee
- Place splints, buffer
- Fix the forearm with the splints, bands in order at above and under the broken part and 2 points of splints, fix the broken leg to the other at the points of ankle and knee.



Hình a



Hình b



Hình c

### 4. *Broken thighbone*

a. Prepare:

- 2 splints: outside splint from arm pit to outside ankle, inside splint from groin to inside ankle, the width of splint is as  $\frac{2}{3}$  as of the limb

- 9 bands, Cotton, cloth

b. Carry out:

- Victim lays on the ground

- Pass bands through: 2 in waist, 5 in ham, 2 in ankle

- Arrange bands:

- 2 bands: 1 in chest, 1 in waist

- 5 bands: 1 close to groin, 2 in above and below the broken part, 2 in knee

- 2 bands in ankle

- Place splints, buffer

- Tie the bands in order:

- Above and below the broken part

- Above and below joints of broken part

- 3 bands above and below the splints: 1 in chest, 1 close to groin, 1 in ankle

- Fix the broken leg to the other at the points of ankle and knee.



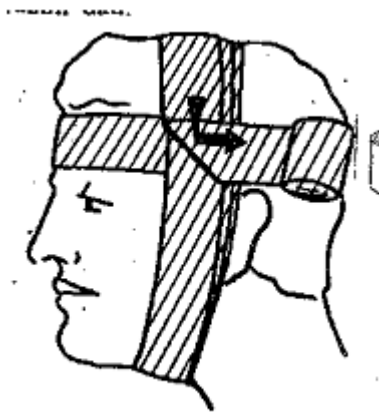
Hình a



Hình b



Hình c



### **5. Broken jaw bone**

#### **a. Prepare:**

- Bandage roll or triangular bandage, dressings, cloth,

#### **b. Carry out:**

- Victim sits comfortably
- Fix the jaw joints with the wrap bandage by bandage roll or triangular bandage.
- Tie a knot on the forehead



### **6. Broken clavicle**

#### **a. Prepare:**

- Elastic bandages or triangular bandage, cotton, cloth, ect

#### **b. Carry out:**

##### **\* Method 1 :**

- Victim sits 2 arms on the waist, chest forward.
- Use elastic bandages, wrap in No.8 type from 2 shoulders over back

##### **\* Method 2:**

- Victim sits
- Put the arm of broken part to the other shoulder
- Use 1 triangular bandage to hang the arm and 1 triangular bandage to fix it to the body.



### **7. *Broken rib***

#### **a. Prepare:**

- Dressing, big-size tape, bands, triangular bandage.

#### **b. Carry out:**

- Place victim in the position of half lying half sitting
- Take of the victim's shirt, request victim to breathe out, place the big-size dressing on the broken part, use the big-size tape to tie from the breastbone around the spinal column to fix the broken rib.
- The sling should be applied so that the supporting pressure is on the uninjured side.



### **8. *Sprain, dislocation***

- Restrict moving
- Apply the ice
- Use elastic bandages
- Elevate the wound limb

## References

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- *“An introduction to disaster management for people living at the commune level”, VNRC*
- Guideline material: *“Child centered for analysis and Disaster Response and Management Plan”* – Save the Children, Centre Committee for Flood and Storm Control, Committee for Population, Family and Children, Vietnam Red Cross Society, International Federation of Red Cross.
- Training material: *“Community-based early warning”* – developed by Malteser International organization.
- Material: *“Community action for disaster response”* – PEER CADRE training of Asian Disaster Preparedness Centre.
- Website: <http://www.nchmf> - National **Centre** for Hydro meteorological Forecasting





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