Special Issue: Emergency Preparedness and Response

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Dear Readers,

The flash flood that affected the Mae Khong Kha Camp in Tak Province last year inspired us to publish this special issue on Emergency Preparedness and Response.

This issue is the result of the joint efforts with WHO (World Health Organization), which is funding its printing costs.

The articles aim at helping health workers and members community to better prepare for an emergency. They address mainly floods and landslides but also give some advice for fire outbreaks.

Some articles focus on preparedness, such as the community contingency plan and flooding and landslides, whereas others provide tools that will be useful during an emergency (e.g., first aid).

We hope the content of this issue will help communities to have less fear of emergencies.

Enjoy your reading!

Best regards,
Dr. Than
Editor

Health Messenger Magazine Programme
117/9 Sukhumvit Soi 4, Soi Samaharn, Klongtoey, Bangkok 10110 Thailand.
Tel: 02 656 7136, 02 656 9370, Tel/Fax: 02 656 8869, E-mail: hmess@loxinfo.co.th

Editor/Dr. Than
Editorial Advisors/Jaruwan Abella, Marie-Theres Bennier, Elisabeth Emerson, Philip Galvin, Christine Harmston, Pranee Umtawong, Hun Hun Oo, Dr. Bé né d Kandjou, Dr. Cynthia Maung, Andrea Neneff, Dr. Naing, Dr. Francois Nosten
Project Coordinator/René Quefele
Administrator/Tiaya Poirrung
Distribution Manager/Prayad Trakansupakorn
နှစ်စဉ်အကြား လောလောဆောင်းရေး အစိုးရအဖွဲ့များကို နောက်ဆိုင်ရာ လောလောဆောင်းရေးအတွက် ကြိုးစားအားကြီးအဖွဲ့များကို စိုက်ပျိုးရေးရာ အတွက် သိရှိလိုက်ပါ။

အကြောင်းအရင်း:

- ဒီပေါင်းများ ရောက်ရှိလာသည်။
- ရေချိန်တိုင်း ကျောက်ထားသည်။
- ရေချိန်တိုင်း ကျောက်ထားသည်။
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- ရေချိန်တိုင်း ကျောက်ထားသည်။

- During the flood.
Flash Flood in Mae Khong Kha Camp

This article describes the flash flood that hit the Mae Kong Kha Camp in September 2002 and its effect on the population.

On 2/9/2002, a massive flash flood hit the Mae Khong Kha Camp.

The course of events

At 2 p.m, heavy rain started to fall on this area of Mae Hong Son Province close to the Salwin River. Within 30 minutes, the level of the small stream flowing through the camp rose to about three metres. There were no warning signs or special procedures for such an event.

Almost immediately, houses located close to the riverbed were washed away. The camp is seven km long, and it took some time for the flood to move through the entire valley. However, since there was no warning system, nobody could warn the rest of the camp, and ask for the evacuation of the school on the riverbed, when the flood started to reach the front of the camp. Fifteen students of this school died by the time the wave reached the back of the camp.

The water level rose to five meters, and then started to subside around 5 p.m. At the same time, numerous landslides affected all parts of the camp.

When the water eventually receded, the whole area was in total chaos with rocks and big logs lying everywhere.

It was the first time a flash flood happened in the camp and nobody knew what to do to save the lives and property of the victims.

The Destruction

During the next few hours:

- 17 people lost their lives and 9 more disappeared (presumably dead). Among them were 15 school children and one pregnant woman.
- Two people were severely injured, one with fractures and the other had hypertension.
- 3100 people became homeless.
- 233 houses were damaged by the flood, and 100 more by the landslides.
- 251 houses were completely destroyed.
- 13 schools buildings, 2 health centres, 4 camp administration offices, 5 NGO offices and the entire new arrival reception area were destroyed.
နောက်ဆုံး (NGO) က စိုးရိုက်ကူးလုပ်ရာများကို ကျင်းပရာ စီရင်ခံမှုများ
- အကြောင်းပြုပြချက်များကို ဖော်ပြရန် အကြောင်းကြည်ချက်ကို
- ဆိုလိုသော သဘောတူးသဘောတူး မိမိတို့၏ အကြောင်းပြုချက်များကို ကျင်းပရာ စီရင်ခံမှုများ

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MHD က အကြောင်းပြုပြချက်များကို ဖော်ပြရန် အကြောင်းကြည်ချက်ကို
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- 40% of the water supply system was destroyed together with 235 latrines.
- Communication between the camp and the outside world were cut for three days since all the roads of the area were unpassable due to the landslides.

**Impact on Health**

The following four weeks, the number of diarrhoea and respiratory infections rose, but the expected increase in malaria cases due to the loss of mosquito nets failed to occur.

**The Response**

During the first days after the disaster, the most important period, the people of the camp were completely isolated from the rest of the world and could not receive any outside aid. Therefore, they had to organize the rescue operations and provide first aid to the injured themselves. The medics of the destroyed health centres saved as much equipment and medicine as possible and set up temporary clinics in private homes, where they served their community the best they could.

On 6th September, the 2 most seriously injured patients were transported by helicopter to the nearest hospital, and relief was flown in according to the needs of the community.

MHD put in place a health education campaign to advise people to boil water in order to avoid any further outbreaks of diarrhoea and brought new ceramic filters to the camp.

At the same time, the water and sanitation team spared no effort in restoring the water distribution system.
Flash Flood in Mae Khong Kha Camp

*COERR နှင့် အဖွဲ့အစည်းများပြုသူများကြား ရောင်းမြို့နယ်အတွင်း ရေးရာပေးသူများနှင့် ပေါင်းထောင်သော မိန့်ခွန်း ဖော်ပြပါသော မြင်ကွင်းများဖြစ်သည်။

*Catholic Office for Emergency Relief and Refugee
Relief items requested by the community, ranked by priority, were flown in by helicopters from 6th September onward:
- 500 large mosquito nets
- Blankets
- Mats
- Instant food
- Clothes
- Cooking utensils, plates, pots...
- Water containers
- Plastic sheet for roofing

In the days after the disaster, the social workers of *COERR and the members of the Karen Women Organization toured their communities to provide mental health support to the people with strong trauma. The trauma was even greater in this case, as one of the traditional Karen ways to cope with such a disaster is to move the affected village. This, of course, could not be done for Mae Kong Kha Camp.

**Lessons learned**

- There is a critical need for communication and warning system. After the flood, MHD installed radios in some health centres of the camp and requested a satellite phone.
- There is a need of better monitoring of the relief distribution.
- There is a need of better preparedness of the camp community, so that a better coordination of the relief effort could be set up.

**Conclusion**

On 5th October 2002, an even bigger flash flood hit the camp again. This time, the radios in the health centres were used as a warning system. There was no major destruction and no victim.

**THIS CAN HAPPEN AGAIN BE PREPARED**

*Catholic Office for Emergency Relief and Refugee*
မြစ်ချောင်း ကျွန်တော်မှာ အေးနှေးအေးများနှင့်ပေါ်တွင် ချိန်စိတ်ကို တွေ့ရသည်။

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Interviews at Mae Khong Kha Camp

This article is based on the interviews with two medics and a social worker from Mae Khong Kha Camp. They share their experience on the flash flood that occurred during September 2002.

May Htoo
Medic, Malteser Germany (MHD)
Mae Khong Kha Camp

May Htoo, a medic working for Malteser Germany, has lived in various camps for more than ten years. The flash flood in Mae Kong Kha was the very first one he has ever encountered during his life both in Burma and in Thailand.

What kind of problems did you face?
There were no special problems during the flood itself because it lasted only for a short time, say for a few minutes. But for me like other people in the camp, I really encountered fear and anxiety during that time. After the flood, the occurrence of hypertension, dysentery, loose motions and skin diseases became higher than the pre-flood period.

Do you know the cause of the flood in your camp?
No, I really don't know.

What are your suggestions concerning floods?
I would suggest building the houses and clinics in safe places far away from the river. Then they would be protected against this kind of disasters.

What advices would you like to give to people if they face this kind of flood again?
I would like to advise people not to carry heavy things if they have to face this kind of flood again because most of the people drowned while trying to rescue their
belongings inside their houses when the water level started to rise at high speed. After the flood, they should follow preventive measures like drinking boiled cold water, not wearing wet clothing and building their new houses in safe places.

Hser Nay Moo
Medic, Malteser Germany (MHD)
Mae Khong Kha Camp

Hser Nay Moo works for (MHD) as a medic in the clinic in Mae Khong Kha Camp. He has extensive experience working on preventive and curative health care with refugees along the Thai-Burmese border.

What did you notice during the flood in your camp?

I saw a lot of terrible scenes during the flood, which are beyond description! It happened within such a short time and took away the lives and property of many friends from Mae Khong Kha Camp. I also saw dead bodies being carried along by the flow of the water. I still remember the bleeding from the eyes, ears and nose! Broken bones, amputated limbs and open abdominal injuries were also seen on some dead bodies. Another sad thing was that I saw a pregnant woman among the victims.

What kind of problems did you find during and after the flood?

Oh! There were many problems during and after the flood. Not only health problems but also social problems! The management of dead bodies was one of the main problems. We had to bury the dead bodies at the place where we found them. We could not bring the bodies to a proper cemetery because of their decaying state.

We had to go from house-to-house to give medical care. I remember many people suffering from not only hypertension, cut wounds and abrasions, but also anxiety, neurosis and skin diseases.

Did you receive assistance and help from other organizations?

Yes, we did receive assistance and help from the Thai military, the Thai Police, the Thai Red Cross and the Mae Sariang Public Health Department, as well as the NGOs working in the area like Malteser, BBC, ZOA, The KRC and others. The Thai military even provided us with helicopter transportation to transfer emergency medical cases to hospitals. Food items, blankets and other relief items were also sent to us at that time.

What advice would you give to other health workers?

There should be a special emergency team to provide health care during flood and other disasters. This is necessary because in our case, the flood cut almost all communication with the rest of the world due to mudslides. The only accessible way for communication was the use of helicopter at the time immediately after the flood.
COERR (Catholic Office for Emergency Relief and Refugee)

ဗိုလ်ချုပ်ကုန်ကျင်းပွဲအတွက် သွားရောက်ကြည့်သော မိုးလောင်းရှင်း သို့မဟုတ် အသက်မပြီး ဖြစ်ပြီး မိုးလောင်းရှင်း သို့မဟုတ် တွေ့ရှိသော အချက်အလက်များ ရှိသော အချက်အလက်များစွာ ကြည့်ရှုချက်စွာ ဖော်ပြပေးချက်ခွဲခြားနေသည်။

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Saw May Lah  
Social Worker  
COERR  
Mae Khong Kha Camp

Saw May Lah is a social worker with considerable experience working with refugees in the camps and providing training and workshops to them. He works for Catholic Office for Emergency Relief and Refugee (COERR) in Mae Khong Kha Camp. We asked Saw May Lah some questions concerning the flood which occurred during 2002 in his camp.

What did you learn from the flood disaster in your camp?

Well, from my point of view as a social worker, I want to mention that social support is necessary along with health care, relief and resettlement activities in the camp. All of the refugees in my camp were depressed and sad due to deaths, loss of homes and property. The responsibility of a social worker is to support and reassure the victims, and to restore their confidence. We went to almost every house in the camp, and special attention was given to families who lost their loved ones during the flood.

What kind of problems did you find?

The major problem that I found was mental trauma among the refugees in my camp. Some of them thought about the disaster again and again and became mentally ill, while some even encountered shock and hypertension. I had to refer them to the hospital for psychological and medical treatment.

What kind of support did you provide to the victims?

We took photographs for record and found land for the homeless victims to resettle. We provided food like Mama (instant noodles) during the emergency period with help from the authorities concerned. We also distributed clothing and medicines.

What activities have you implemented since the flood?

After the flood, we have had sharing meetings about the camp situation, lost property, and many other social issues at least once a month. We classified social groups to give more attention; for example to the ones over sixty years old, the orphans, the disabled and the single-parent households in the camp.

We provide training on agriculture activities and small-scale domestic industries, and also collaborated with other social organizations like KWO (Karen Women Organization) and KYO (Karen Youth Organization).

What advice would you like to give to others who have never faced such a disaster?

We need to be prepared for future disasters of all kind, which can happen inside the camp as well as outside. The flood in our camp should remind all parties concerned to prepare all preventive measures to protect the marginalized community in the camps if a disaster happen again in the future.
Floods and Landslides
Health Messenger Team in collaboration with ADPC. (Asian Disaster Preparedness Center)

This article explains what floodings and landslides are, and gives practical advice to prepare the community to face them.

What is a flood?

A flood is a high flow or overflow of water from a river or similar source of water occurring over a period of time. Periods of heavy rain can result in an extra volume of water coming into the waterways, leading to rises in the water level of streams and rivers. A flood happens when the carrying capacity of the waterways fails to hold the total volume of increased water at any given time.

People who live near rivers, or in low-lying coastal areas, live with the threat of floods.

There are several types of riverine flooding:
- Slow-onset flood—this type of flooding happens slowly and can last for one or more weeks, even months on some occasions. It can lead to major material loss and damage to crops as well as immense damage to infrastructure such as roads.
- Rapid-onset flood—this can occur more quickly in the mountain headwater areas of large rivers as well as in rivers draining to the coast. It often lasts for a few days only. Compared to slow-onset floods, rapid-onset floods can potentially be much more damaging and can pose a greater risk to loss of life and property since there is generally much less time to take preventive action.
- Flash flood—this results from relatively short yet intense bursts of rainfall, often from thunderstorms. The constant influx of water finally causes a strong overflow to begin, powerful enough to sweep even vehicles away, roll boulders into roadways, uproot trees, destroy buildings and drag bridges off their piers. The most frightening aspect of flash floods is the rapidity with which the water rises. This type of flooding poses the greatest threat to loss of life and can result in property damage and major social disruption.

Types of flooding

Riverine flood: Flooding along rivers is a natural and seasonal phenomenon, especially during the rainy or monsoon season when heavy and torrential rains occur, filling river basins with too much water, too quickly.
မြို့အတွင်းမှန်းလိုက် - Flood in Town setting စာကြောင်း - မိုးပိုင် Source: ADPC
During the monsoon period, bathing or swimming in irrigation channels, storm water drains or inland rivers in mountain regions should be avoided!

- Coastal flood—It occurs when strong onshore winds push water from an ocean, bay or inlet onto land. This can take the form of storm surges associated with tropical storms, cyclones and tidal waves. It can cause vast areas along the coast to flood.
- Urban flood—as land is converted from fields or woodlands to roads, it loses its ability to absorb rainfall. Urbanization increases runoff 2 to 6 times over what would occur on natural terrain. During periods of urban flooding, streets become inundated.

What is a landslide?

A landslide occurs when part of a natural slope is unable to support its own weight. For example, soil material on a slippery surface can become heavy with rainwater and slide down due to its increased weight. A landslide is a downward or outward movement of soil, rock or vegetation due to gravity. This movement can occur in many ways. It can be a fall, topple, slide, spread or flow. The speed of the movement may range from very slow to rapid. The mass moving mass can destroy property along its path of movement and cause death to people and livestock.

Landslides can be caused by natural factors, such as intense rainfall; manmade cause, such as construction done without proper engineering input or the removal of vegetation cover and deforestation; or a combination of both factors.

Landslides and flooding are closely associated because both are related to intense rainfall, runoff and ground saturation. Debris flow from landslides can cause flooding by blocking valleys and stream channels, forcing large amount of water to back-up. This causes backwater flooding in the upstream area and if the blockage gives away, quick downstream flooding occurs. In turn, flooding can cause landslides due to rapidly moving floodwaters, which often undercut slopes.
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• အခြေခံစာရင်းများကို ကျွန်တော်တို့ကြောင့် အောင်မြင်မည်။ အခြေခံစာရင်းများကို ကျွန်တော်တို့ကြောင့် အောင်မြင်မည်။
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Flood and Landslide Impact

- Result in injury or death to people and animals. Drowning is the leading cause of death.
- Mental health suffering and inconvenience.
- Damage houses and property.
- Affect livelihood of people because floods destroy crops, farmlands and livestock.
- Cause food shortage.
- Long-lasting floods can disturb normal cultivation pattern.
- Cause soil erosion. After floods or landslides, lands are usually covered with debris, sand or boulders, which reduce farming areas and fertility of soil.
- Damage infrastructure and facilities like health centres, schools, roads…
- Disrupt clean water supplies and contaminate the source of water, which can subsequently cause diseases.
- Trigger epidemics, water borne diseases, help mosquitoes to breed, resulting in the spread of malaria.

Hidden dangers

Many of those who drown in floods, especially flash floods, may have actually been killed by the violent current of water or hit by objects in the water or in the river bed. Simply being a good swimmer may not be enough to survive.
- Just 6 inches of rapidly moving flood water can knock a person down.
- A mere 2 feet of water can float a large vehicle, even a bus.

NEVER ENTER OR DRIVE INTO FLOOD WATERS WHEN AN OBVIOUS CURRENT EXISTS.

Survival Tips:

Before a flood or landslide
(See articles on Community Contingency Plan-Page 25.)

EMERGENCY FLOOD PROOFING: has to be put into effect at short notice. Methods commonly used involve building temporary embankments, levees, or barriers using whatever available material during the flooding.

Although it is inexpensive, it is hard work and requires a good plan of action to ensure materials, labor and equipment are available at a moment’s notice.

The most readily available material is sand. Sandbags stacked to form a barrier against rising water levels are the most common emergency flood proofing technique. The bags must be strong enough to hold sand or other filling material and withstand the contact with water indefinitely. Because the water exerts pressure on the sandbags, if possible, a trench may be dug (along the centre of the levee or embankment) to prevent the levee from moving.

IN TIMES OF ADVERSE WEATHER CONDITIONS, ALWAYS LISTEN TO THE OFFICIAL WARNING ISSUED BY THE LOCAL AUTHORITIES AND WEATHER REPORTS ON LOCAL RADIO.

BE VIGILANT OF SIGNS THAT MIGHT BE NOTICED PRIOR TO MAJOR LANDSLIDES OR ROCK FALL IN MOUNTAINOUS AREAS: INSPECT THE SLOPES FOR CLUES SUCH AS APPEARANCE OF CRACKS AND THEIR
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RAPID EXTENSION OVER THE SLOPE; UNUSUAL SOUNDS OF SOIL AND ROCK MOVEMENT OR BREAKING OF TREES, SUDDEN APPEARANCE OF SPRINGS, SEEPAGE TRACES OR PATCHES WITH GROUND SATURATION IN AREAS THAT HAVE NOT TYPICALLY BEEN WET BEFORE

During the flood or landslides
- Do not eat food which has been in contact with flood water. Do not eat spoiled food supplied by outsiders. Such food can contain bacteria in it and you could be infected and become ill. Do not eat dead animals. They may have died due to diseases.
- Collect rainwater until you get fresh water supplies. Boil all water before drinking it. This is a better and safer way to obtain water until other water supplies have been declared safe.
- Do not use water from dug wells during such time until it has been declared safe by authorities.

- Watch your children. Do not allow them to play or swim in flood water. Keep them away from the slopes of river banks.
- Beware of poisonous animals such as snakes and spiders, which may move to drier areas in your premises.
- Be aware that wading through contaminated water can be harmful and cause skin diseases.
- Do not enter flood water without checking depth and current.
- Keep away from river banks in the flooded areas as they may be undermined and may collapse.
- Listen to official evacuation warnings.
- If you have to evacuate your home, turn off the electricity and gas supply.
- If you evacuate, move to elevated areas, not in the direction of the valley.

BE VIGILANT! REMEMBER: ONE LANDSLIDE CAN FOLLOW ANOTHER
စာပိုဒ် - အထောက်အကူ

Source: ADPC
After the flood or landslide

- Inform the community that you are returning home and obtain advice before making a decision.
- Keep listening to the radio for news. Additional flooding or flash floods may occur.
- Emergency workers may be assisting people in flooded areas. You may be able to help them.
- Use mosquito nets when you sleep to prevent mosquito and insect bites.
- Do not allow children to enter houses/buildings that have been flooded unless they have been checked by an adult.
- Do not touch any damp electrical sockets or turn on the electricity if the house was subjected to floods until it has been checked and has dried out for some time.
- Repair latrines and disinfect the water supply sources of the household/community.

How to lessen future flooding/landslide and its impact:

- Have a meeting with the community to review the procedures during and after flooding. Draw lessons that can be learned and discuss what went wrong, difficulties encountered, setbacks as well as successes. Try to accommodate all recommendations in the list of preparedness actions for future floods.
- Encourage community members to participate in the clean up of the surroundings and common areas.
- Plant bamboo or appropriate trees around the houses and in the common areas to prevent erosion.
- Stop cutting down trees and plant them instead. They provide a strong natural protection against floods. Replant trees where they have been removed on slopes and slope base to prevent erosion.
- Try to protect the slopes. Prevent people from excavating, removing materials from the soil or cutting trees.
- Do not throw rubbish in rivers or canals.
- Do not throw anything like cigarette butts, wrappers especially those made of plastic or non-biodegradable objects, etc. anywhere. They may clog or block the drainage system thereby impeding the flow of water.
- Avoid building houses at the base of slopes that are prone to landslides.
- When constructing on a slope, use a design that suits the natural slope. Do not remove vegetation and large trees, and obstruct natural streams or drainage paths during construction.
- Support community activities intended to lessen the effects of floods and landslides.
Changing Concepts of Disaster Management

before
Providing aid is the responsibility of the disaster agency

now
Disaster management is everybody's responsibility. Disaster agencies have a supportive role.
The aim of this article is to give a few guidelines according to which a community can make its own contingency plan in the event of floods. Although we are using example of floods, a similar process can also be used to design contingency plans for other types of disasters.

If a village or a community is often hit by flooding because of its geographical location, there is a need to work out a plan which on one hand, prevent losses and on the other, enables faster recovery after the disaster.

WHAT IS A COMMUNITY CONTINGENCY PLAN?

A community contingency plan is a list of activities a community agrees to follow to prevent the loss of life, livelihood and property in case a flood strikes.

Every, village community is different in terms of its inhabitants, its geography, its resources and its way of making community decisions. Thus, contingency plans will differ from community to community.

PLANNING

WHO MAKES THE PLAN?

The community: the plan has to be made by the inhabitants of the village itself.

There should be representatives of women, youth, the elderly, the disabled, artisans, etc.... For the plan to work, every segment of the community has to be represented during meetings to express their needs and concerns, and to share their experiences.

NGOs and government officials: to carry forward the process of discussions and guide the community towards a workable plan, the involvement of NGO volunteers, community leaders and local government officials is necessary. They possess the necessary authority, and often have skills in community mobilisation, conducting these sessions and making sure that decisions are arrived at through participatory discussions.

The community sessions can be conducted during hours that are suitable for the community. The meetings can also be held in
small groups, which are more manageable and give everyone a chance to express their opinions and ideas.

HOW TO MAKE THE PLAN: 5 STAGES

STAGE 1: DISCUSS WHAT HAPPENED IN THE VILLAGE DURING THE LAST FLOOD (Review and Analysis).

The community discusses what happened in the last flood that hit the village. Those villages that have not faced floods may rely on the experience of other nearby villages.

BEFORE THE FLOOD
- Was there any warning? When and who did it reach?
- What precautions and preventive measures were taken? What could individuals – families – community protect? What would they have liked to protect?

DURING THE FLOOD
- What was the experience? Duration of the rainfall – duration and speed of the floods. Where was everyone and what did individuals – families – community do?
- Did anyone move to shelter or safe houses or safe buildings?

AFTER THE FLOOD
- What did everyone do after the flood subsided?
- How many deaths and how much damage to property and livelihood? Who faced maximum losses and why?
- What kind of help was needed? Did help arrive on time? Was it appropriate?
- What kind of difficulties were faced? Who had the most difficulties? How were the problems solved?

- What activities could have reduced damage, injury and death?

The exercise gives everyone in the community an opportunity to know how prepared the community was to face the flood. Based on the findings of this exercise, the community will decide on the different ways through which the village can be better prepared to respond to floods.

STAGE 2: MAKE A DESCRIPTION OF THE VILLAGE (Situational Analysis).

Community volunteers, youths, women, government and non-governmental officials make a map of the village identifying the following characteristics. Modifications can be carried out to suit the characteristics of the village.

Mark on the map the geography and the topography of the village, e.g.
- What is the village surrounded by in the northern, southern, eastern and western directions?
  - Hills, mountains, elevated areas, inclines, low-lying areas.
  - Nearest water bodies.
  - Distance to nearest village.
  - Distance from the nearest district/sub-district office.

Mark on the map the habitation in the village and where they are located, e.g.
- Number of houses – types of houses.

Make a list of the population – number of families – men – women – children, the disabled, the terminally ill, pregnant women, etc.

Mark on the map the natural resources in the village, e.g. lands and fields – forests – tanks and ponds.
Make a list of the various livelihoods and assets of the community, e.g.
- Boats, nets.
- Irrigation facilities of farmers, food grain stores and other inventories.
- Looms and potter wheels of artisans.

Mark on the map existing infrastructure in the village and where it is located, e.g.
- Roads.
- Temples, churches or any community building that can be used as shelter.
- Schools and education facilities.
- Health centres or primary health care units.
- Wells, tubewells, and sanitation facilities.
- Power installations, telephone, post office and other such structures.

Mark on the map potential hazards such as landmine polluted areas.

The mapping session is important for situational analysis because the following stages to contingency planning depend on the information listed here.

STAGE 3: LISTING WHAT CAUSES DAMAGE IN A FLOOD AND WHERE (Hazard Mapping)

Based on the experiences of earlier floods, the community identifies, what have been the different effects of previous flooding, and where in the village these hazards are most likely to affect life, property, infrastructure and economic activities. These are marked on a separate map.

Flood Hazards: Mark on the map.
- The areas near the streams, canals and riverbanks.
- Electricity towers, power transmission lines and other infrastructure installations.
- Fields and so on.
Note: From past experience, local people know the general boundary of flood areas.

Landslides hazards: Mark on the map areas with a history of landslides.
- Base of mountainous slopes with small streams or drainage paths.
- Areas close to the base or top of a cut or filled slope.
- Developed hill slopes (settlements).
- Areas close to the base of rock mass showing points.
- Areas at the base of a steep slope with a lot of detached but buried boulders.

This list helps the community to know where the geographical weaknesses of the village are and who and what gets affected because of them. This is discussed in stage 4. Contingency planning will depend a great deal on knowing about these weaknesses.

STAGE 4: ASSESSING WHO IS AT RISK AND WHAT IS AT RISK (Risk Mapping: Identifying vulnerable people and areas).

The community, based on the experience of previous floods, identifies those groups and people who will fare the worst in the village. A list is made of who is at risk and what is at risk in the village and marked on the hazard map, shown in stage 3, e.g.

Who is at risk and why?
- Elderly people and the disabled
- Children and pregnant women
- Sick and ailing people
- Widows and single women
- Families living near the river/stream
- Families living in fragile houses
- Other such groups

Who is at risk? How to reduce the risk?

- Widows and single women; elderly people and the disabled
  - Who may need help from volunteers to carry out house strengthening and repairs?
  - Who will need help to carry children and belongings in case there is a need to evacuate?

- Families living near the river or stream
  - These families need to be among the first to be evacuated.
  - They could think of relocating their houses away from the flooding and landslide prone area.

- Children vulnerable to diarrhoea outbreak
  - Health education implemented within the community should include basic health and hygiene practices.

What is at risk? How to reduce the risk?

- Cattle and livestock
  - Naturally protected areas should be selected in advance and cattle moved there with adequate fodder.

- Family valuables, fixed assets (looms...), etc...
  - A plan should be made to move them to a safe place in case of sufficient warning.
Evacuation and Rescue Group

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- သို့မဟုတ် ကူညီပေးပါ။
- တိုင်းဒေသကြီးများကို သိရှိပါ။
- အခြေခံယာယောများကို အသုံးပြုပါ။

စိတ်ချရေး (၃) အမွေအနှစ်များကို စိတ်ချရေးပါ။
(၁) မြင်ရှိမှုများနှင့် စိတ်ချရေး
(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
- ကူညီပေးပါ။
- သို့မဟုတ် အသုံးပြုပါ။

စိတ်ချရေး (၄) အမွေအနှစ်များကို စိတ်ချရေးပါ။
(၁) မြင်ရှိမှုများနှင့် စိတ်ချရေး
(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
- ကူညီပေးပါ။
- သို့မဟုတ် အသုံးပြုပါ။

စိတ်ချရေး (၅) အမွေအနှစ်များကို စိတ်ချရေးပါ။
(၁) မြင်ရှိမှုများနှင့် စိတ်ချရေး
(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
- ကူညီပေးပါ။
- သို့မဟုတ် အသုံးပြုပါ။

စိတ်ချရေး (၆) အမွေအနှစ်များကို စိတ်ချရေးပါ။
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(၂) အခြေခံယာယော
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စိတ်ချရေး (၇) အမွေအနှစ်များကို စိတ်ချရေးပါ။
(၁) မြင်ရှိမှုများနှင့် စိတ်ချရေး
(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
- ကူညီပေးပါ။
- သို့မဟုတ် အသုံးပြုပါ။

စိတ်ချရေး (၈) အမွေအနှစ်များကို စိတ်ချရေးပါ။
(၁) မြင်ရှိမှုများနှင့် စိတ်ချရေး
(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
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- သို့မဟုတ် အသုံးပြုပါ။

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(၂) အခြေခံယာယော
(၃) အခြေခံယာယောအဖွဲ့များ

- အခြေခံယာယောများကို သိရှိပါ။
- ကူညီပေးပါ။
- သို့မဟုတ် အသုံးပြုပါ။
What is at risk and why?
- Cattle and livestock.
- Valuable family documents.
- Houses and weak structures.
- Livelihood assets such as looms and farming equipment.
- Pump-sets, generators and solar stations.
- Standing crops, horticulture trees and plantations.
- Village water sources.

The community now has to decide how those at risk can be safeguarded and what should be done as precautionary measures.

SATAGE 5: HOW TO REDUCE RISK
(Opportunity Mapping)

The community identifies:
- Safe buildings where families may take refuge in case of flooding; such as schools, temples or churches, etc...
- Elevated land, hillocks and similar areas for livestock protection.
- Safe evacuation routes.
- Existing health, medical and sanitation facilities that can be used and strengthened in the event of flooding.
- Sources of funds to carry on contingency and preparedness activities.
- Motivated and responsible men, women and youth volunteers, who can implement and supervise the activities of the contingency plan.
- Precautions to safeguard people and property, which were identified during the mapping sessions.

This enables an exhaustive list to be made by the community where possible damages and probable precautions are listed next to each other.

What remains to be done is to decide how these precautionary activities will be implemented – who takes responsibility for the implementation and when these activities should be implemented.

IMPLEMENTATION

WHO CARRIES OUT THE PLAN AND WHEN.

During stage 5 of the opportunity mapping, villagers list from among themselves VOLUNTEERS who can implement and supervise the activities of the contingency plan, e.g. members of the village youth groups, women groups, literate youths of the village, school teachers and so on.

Then these individuals form small action groups of 5 to 10 members each, and each group is given a particular responsibility and the leaders of these action groups form a co-ordination group.

Each group will have distinct activities to carry out before and after the flooding.

Examples are

- Flood Warning Group
  To be able to limit the impact of the flood, it is imperative to set up a communication channel to have a warning system. It can be done through radio or other means. In the Mae Kong Ka Camp, people used bamboo, which they hit on trees.

  Members of this group will have to be trained to understand radio warnings and spread them throughout the community. The group can also set up a warning system for flash flood.
လက်ရွေးချယ်မှုအချက်အလက်အပေါ် အခြေခံချက်များ ရှိသော အာရုံစိုက်မှုကို အရေးပေါ် ကူးလိုအပ်သည်။

အခြားများစွာသော အချက်အလက်များနှင့် အခြေခံချက်များဖြစ်သော အခြေခံချက်များကို ကျေးဇူးပြုသည်။

အခြေခံချက်အများစုမှာ အဆောက်အဦးများကို လည်းကောင်း၊ အစိတ်အပိုင်းများကို လည်းကောင်း သတိထားပါသည်။

**Emergency kit**

*Source: ADPC*
- Shelter Management Group:
  The members of this group can have more female members. They will be at the shelter or safe building looking after the evacuee's food and water requirements.
  - Before the rainy season, they have to check the safe buildings that have been identified as possible shelters, ensure that sanitation facilities are usable and in place.
  - During the disaster, they arrange a community kitchen to avoid too many cooking fires in the shelter; move stocks of food/water to the place; organise space to house evacuee families and help them to settle in the shelter. They have to ensure strict hygiene practices and distribute food according to registered identification slips to prevent duplication or negligence.

  Note:
  Shelters can act as centres for distributing relief material so that supplies are not looted.

- Evacuation and Rescue Group:
  The members of this group need to be physically strong and trained in evacuation and rescue methods.
  - Before the disaster, they identify safe routes for evacuations, and prepare a rescue kit (a paddle, rope, iron hooks, container to bail water, torches, tyres or other floatable objects.
  - During the disaster, they help vulnerable groups to evacuate.
  - After the disaster, they inspect the village, bring in stranded and injured people, clear the roads to restore communication and transport, maintain a "missing persons" registry, help transfer the injured and wounded to the nearest hospital or bring in doctors.

- First Aid and Medical Group:
  There should be an equal number of men and women in this group. Those with some knowledge of nursing (local health workers) will be preferable.
  - Before the disaster: maintain a list of pregnant women, infants, the disabled, the sick and old in the community; stock a first aid box and keep stretchers ready, stock ORS for diarrhoea outbreak and malaria rapid test in malaria endemic areas.
  - During the disaster: move the first aid kits to the shelter area; look after the medical needs of the evacuees.
  - After the disaster: attend the injuries and traumas of rescued people; help doctors and medics to transfer the ill and injured to hospitals.

- Sanitation Group:
  - Before the disaster: stock bleaching powder in large quantities, and if possible some water filters, kerosene and wood fuel to dispose of carcasses.
  - After the disaster: spray bleaching powder or other disinfectants in the village to prevent the spread of infectious diseases; check water contamination with a water testing kit; inform people about purifying water before drinking it; repair the latrines; carry out curing of water in wells by chlorinating it.

ONE OF THE MOST IMPORTANT MESSAGES AFTER A FLOOD: BOIL THE WATER BEFORE USE!

- Relief Group
  The members of this group identify the most vulnerable persons, collect and distribute relief materials such as food supplies, utensils and clothes and co-ordinate all the relief requirements of the other action groups. The members have to be capable of interacting with the local authorities and/or NGOs, as
they will be responsible for coordination of the outside help.

- A carcass disposal group.

**How to coordinate**

1. Explain what you can do and what you need.
2. Listen to what they can do and want to do.
3. Decide together what is going to be done by whom.

**OTHER GROUPS**

Communities may chose to create other groups according to their needs and problems. They may be as follows:

- A patrolling group to look after property left behind by evacuees.
- A liaison group between the government and the community.

The bodies of victims of natural disasters who died as a result of trauma do not pose a risk of epidemics. The greatest risk that exists is transmission of gastrointestinal illnesses caused when bodies, dead animals or bones contaminate water sources.

Destruction of animal carcasses: this is not easy because they are difficult to burn and burying them involves a great deal of labour. Often, they have to be sprinkled with petrol and covered with earth to protect them from predators until they can be destroyed or buried.

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**Changing Concepts of Disaster Management**

**before**

Goal is to meet emergency needs, and to bring things back to normal

**now**

Goal is to reduce long-term vulnerabilities and to increase people's capacities to better cope with disasters

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*Source: ADPC*
flash flood-prone village situation
• A counselling group to help victims suffering from trauma, grief and worry (See article-page 41)
• A damage assessment group to assess the extent of damage done to the village: -lives lost – damage and lost of property and damage to infrastructure.
• A reconstruction and rehabilitation group to get government or NGOs help to carry on reconstruction activities in the village.

CONCLUSION

Once a contingency plan is prepared by the village, it has to be written down and members of the action groups have to be responsible for spreading the information to the community about decisions that have been taken by the community.

It is advisable to have a mock drill on a designated night during the rain. In this drill, the group members should move from different localities taking the people and some material to the safe buildings. This exercise would help them to learn what they will possibly have to face. These lessons learned can be utilised in preparing the contingency plan.

Changes in the village, new families, births, deaths, new arrivals and so on-have to be incorporated in the maps and keep revising the plan accordingly.

REMEMBER: The MAINTENANCE of the plan is the most difficult task to organize. People who will be responsible for this role have to be identified.

The plan should also be shared with authorities and NGOs, in order to increase the coordination of aid activities when the flooding happens. This would also help raise the authorities’ awareness of about the needs of the the community and find consensus on the strategies that they are developing.

Heavy rain can cause landslides (Source: ADFC)
စီးပွားရေး အားလုံးချုပ်မှုမှာ အသုံးပြုသူများအကြား သက်ဆိုင်သော အချက်အလက်များနှင့် ဆွေးန်းစားချက်များ ပြောပြပါသည်။

Rescue operations.

ဗိုလ်ချုပ်တွင် Rescue operations.
The Role of the Health Workers in Case of Emergency

Health Workers have a crucial role to play during and after emergencies. This article provides advice for better preparedness to face an emergency situation.

During rescue operations:

During a disaster, the need for search, rescue and first aid is likely to be so great and so urgent, that most of the immediate help will come from uninjured survivors and from the community. The rescue operations will be more effective if volunteers in the community have benefited from first aid training (see contingency plan page 25), and if health workers can participate in the rescue team. During the rescue operations, they will have to use first aid skills. (see First Aid- Page 53)

A disaster may result in people being
- trapped under the ruins of buildings that have collapsed
- buried under mud or landslides
- cut off by floods or the blockage of communication routes
- burned by fire
These people must be reached and rescued.

AT THE HEALTH CENTRE:

Organizing the health centre to meet the emergency:

As soon as possible after the disaster has struck, all local personnel should report to the health centre where they usually work. Alternative sites should be designated beforehand in case the health center is not accessible. The first task is to assess quickly any damage suffered by the facility and its premises and to decide whether it can still be used or whether it would be better to move to a less damaged building or temporary shelter. If the move is necessary, a new health centre should be quickly established, using all equipment and material that have been possible to save.

Experience shows that during the first few hours, it is mainly relatives, friends and local volunteers who bring the injured to the health centre. Preparations to receive them must be made by designating a space where the local health personnel can screen them to determine what kind of care they need, while volunteers receive them.

Emergency Phamacy list available at WHO website www.who.int

TRIAGE:

When a large number of injured people are brought in at the same time to the health center, the most expert and experienced among local health workers, taking into account the equipment available and professional skills, must be responsible for sorting out the victims between:

A. Those who must be sent urgently to the nearest and properly equipped hospital. Two orders of priority may be distinguished-
- Emergency cases that must be operated on within 6 hours: (Red tag in hospital triage).
အကြောင်းအရင်း အဖြစ်ခြင်းအရေးကြီး လုပ်ဆောင်နည်း

- အကြောင်းအရင်းကို စာရင်းထည့်သုံးသည့် အခြေခံလုပ်ငန်းလုပ်ငန်းစဉ် ဖြစ်သည်မှာ တွေ့ရသည်။
- အမျိုးသားအရေးကြီး စာရင်းအရေးကြီး ဖြစ်သည်မှာ တွေ့ရသည်။
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သင့်ကို ဖော်ပြသည်။

- ပြုလုပ်လုပ်ငန်းစဉ် ဖြစ်သည်မှာ တွေ့ရသည်။
- ပြုလုပ်လုပ်ငန်းစဉ် ဖြစ်သည်မှာ တွေ့ရသည်။
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- ပြုလုပ်လုပ်ငန်းစဉ် ဖြစ်သည်မှာ တွေ့ရသည်။
Reception at the health centre or hospital

It is essential to:

- Speak to those arriving, answer their questions and tell them where they can stay.
- Give them blankets if they are cold.
- Help them wash if necessary (people extricated from the rubble, people covered in mud, etc...) and give them something to drink.
- Look after the children.
- Help scattered families to reunite or communicate.
- TAGGING: Identify the injured, giving priority to those who are unconscious or are not accompanied by members of their families. The name of the injured person and the place he or she was brought from should be noted on a sheet of paper, which will be placed in a plastic cover, if possible, and attached to the person. If the victim’s name is not known, the note must bear the information given by rescue workers and which can later make identification easier such as the place where the victim was found, the circumstances, other persons present, etc.
WAYS TO PREPARE ORS SPECIAL DRINK

ORS အသုံးပြုသောအခန်းချက်ကြက်ချက် တစ်ချက်

Figure 1
ORS Special Drink from the prepared packet
ORS အသုံးပြုသောအခန်းချက်ကြက်ချက်

Caution!
Making ORS special drink with too much salt can be harmful. So before adding the sugar, TASTE IT TO BE SURE IT IS NO SALTIER THAN TEARS!!!
1. Control bleeding by compressive dressing or tourniquet.
2. Crushed limbs, head injury, broken neck and back.
3. Deep abdominal injuries (penetrating injuries, spleen injuries,...)
4. Weakening breathing.
5. Multiple rib fractures.
6. Hemothorax (blood in the chest), Pneumothorax (air in the chest).
7. Major loss of tissue (muscle, skin, etc...).
8. Burns: over more than 30% of the body for adults; 10% for children.
9. Coma.

IF THE PATIENT PRESENTS MORE THAN 2 OF THESE PROBLEMS, ASSESS FIRST THE CHANCES OF SURVIVAL BEFORE REFERING.
- Emergency cases for which it is possible to wait a few hours before operating (Yellow tag in hospital triage).

B. Those who need to receive care on the spot, and to whom health workers can provide first aid treatment (Green tag in hospital triage).
Priority should be given to the most serious cases.
(The B group also includes very serious cases with no chance of survival that it would be pointless to move.)

1. Burns to less than 30% of body (or 10% for children)
2. Eyes, ears, nose and throat injuries
3. Skin injuries
4. Hypothermia

Once again, the health workers will have to use their first aid skills to assist the patients (See triage tags).

POST EMERGENCY CARE

After the emergency, the health workers should be prepared for a number of disease outbreaks that may result from a disaster. They will also have to focus on the most vulnerable members of the community, which are the young children and the elderly.

- MALARIA OUTBREAK
As many people will lose most of their possessions, including mosquito nets, and/or have to move to resettlement areas that might be infected, a malaria outbreak might happen after an emergency situation in a region such as Burma and the Thai-Burmese border.
- Stock malaria rapid tests.
- Distribute mosquito nets as soon as possible.

- DIARRHOEA OUTBREAK
During a disaster such as a flood, the

To prevent or treat dehydration - ACT QUICKLY
- Give lots of liquids to drink: ORS is best. If not possible, give a thin cereal porridge or gruel, teas, soups or even plain water. Give sips of the drink every 5 minutes, day and night, even if the person vomits, until he begins to urinate normally. A large person needs 3 or more litres a day. A small child usually needs at least 1 litre a day, or 1 glass for each watery stool.
- Keep giving food: As soon as the person accepts it. Keep breast feeding a baby as often and as long as the child wants.
- If danger signs appear: bring to the health centre.
community will lose access to clean water sources and you can, therefore, expect a sharp rise of diarrhoea cases. The most affected, and the most vulnerable will be the children.

The most important adverse effects of acute diarrhoea are dehydration, owing to the loss of water and salts in liquid stools; and nutritional damage, owing to the inability of the children to retain food. Oral Rehydration Salts (ORS) solution prevents dehydration during diarrhoea by providing water, glucose and salt in a single solution.

- Stock ORS.
- Start health education campaigns on the use of boiled and safe water and ORS.

MENTAL HEALTH

After a disaster, a lot of people have lost friends and family members, all their belongings and are suffering from Post Traumatic Stress Disorder (PTSD). It is characterized by high levels of anxiety that interfere significantly with the victim’s ability to lead her/his life.

Symptoms and signs
- Person’s ability to interact with others, live and enjoy life is disturbed. Withdrawal (little or no communication with others).
- Panic attacks (episodes of sudden fear occurring apparently for no reason).
- Vague symptoms such as headaches, sleeping problems, joint pains, tiredness, irritability, irrational fear, mood disorder.
- Personality changes, violent outbursts, poor concentration.
- Disturbed sleep patterns.
- Chronic physical symptoms: not relieved by medical treatment, frequent visits to health centres.

Treatment
- Counselling (see counselling guidelines in Issue 19).
Worry about a risk

(Post traumatic stress disorder)

- Feeling sad or upset when thinking about the past event
- Avoiding places or things that remind you of the event
- Having difficulty sleeping or eating
- Feeling easily startled or jumpy
- Feeling irritable or angry
- Difficulty concentrating or remembering
- Feeling hopeless or helpless
- Experiencing physical symptoms such as headaches, heart palpitations, or digestive problems

If you are experiencing these symptoms, it is important to seek help from a mental health professional. They can provide support and strategies to help you cope with your symptoms.
- Relaxation therapy.
- Empathy: listen and accept what the person is saying, ask how they feel about the incident. Express support by saying that though you probably don’t know what it was like to experience something like that, nonetheless, you understand the emotions they have.

- Try to listen to the patient's problems. Do not judge. Express that you are interested in what they have to say and try to let them express themselves. Above all, let the patient know they are not alone and that you understand the reasons for their stress.

Breathing exercises

The objective is to reach a state of inner peace for the body and the mind by controlling the breathing.

Do this exercise in a relaxed position, either sitting comfortably or lying on a bed. Learn to breathe with your abdomen. In order to breathe deeply and slowly, use your abdomen. You can put your hand on it and you can feel it expand as you breath in deeply. You can even feel that you can inhale air deep in your chest if you push your abdomen forward.

Then let your abdomen and chest relax and feel the air going out.
Concentrate on breathing with your abdomen. Breathe slowly and deeply.
To help focus your mind on the breathing, you can count when you breathe in and out. For example, you can count three for each breath. With further practice you can increase the counting during each breath to help you to breathe more deeply and slowly.

Be careful not to become sleepy or dizzy. You should feel the peacefulness spreading in you and keep your mind concentrated on the breathing. Do not exaggerate or accelerate your breath.

To help your concentration, you can focus your attention on the airflow in your nose.
စာမ်ကျပ်ချက်

ယခုပြောရေသံကိုသော်လည်း နောက်ဆုံးအနေဖြင့် စာလုံးတစ်လျော့ ကျွဲပြေးဦးစီးသော်လည်း နောက်ဆုံးအကြောင်းရေးဆိုရှိသောစာလုံးတစ်လျော့

• ကျွဲပြေးဦးစီးသော်လည်း နောက်ဆုံးအနေဖြင့် စာလုံးတစ်လျော့
• အကြောင်းရေးဆိုရှိသောစာလုံးတစ်လျော့

မြန်မာစာသင်္ချောင်းသဲမှာ အများကြီးပေါ်ခြင်းကို တိုင်းပြိုင်ပြေးဦးစီးသည့် နောက်ဆုံးအကြောင်းရေးဆိုရှိသောစာလုံးတစ်လျော့

စာလုံးတစ်လျော့ ကျွဲပြေးဦးစီးသော်လည်း နောက်ဆုံးအကြောင်းရေးဆိုရှိသောစာလုံးတစ်လျော့
Relaxation

Different activities can help people to relax: singing, listening to music, going for a walk, taking time to talk with friends to whom feelings and experiences can be shared. Four relaxation techniques can be very useful and effective for people suffering from stress, anxiety and psychosomatic disorders:

- Breathing exercises
- Muscular relaxation
- Recitation of prayer
- Meditation

These exercises should be done in a quiet place, where nothing or nobody can disturb you, wearing loose clothing and doing it twice a day for at least ten minutes preferably before meals. It is also important to be focused when doing the exercise and not to think about other things.

The regular practice of these exercises can greatly help to find a much greater peace of mind, tranquillity and calm in various situations and improve physical health.

Muscular relaxation

This is a very good exercise when stressed, muscles are continuously contracted and/or the patient has headaches, backaches, neck pains, joint pains and feel weak and tired.

For this exercise, lie on your back on a bed or a mat. Keep your arms on each side close to your body with the palms upwards. Observe your breathing as mentioned above.

Starting from your toes, relax each part of your body. First, you concentrate your mind on your feet and think deeply, “my feet are relaxed, very relaxed” and try to feel the relaxation spreading in your feet. Then move up step by step to your ankles, legs, thighs, abdomen, chest, arms, hands, shoulders, neck and head. For each part of your body, you should think “my... is relaxed, very relaxed”. In each part of your body, you should feel the relaxation and tranquility spreading.

At the end of the exercise, the whole body should be deeply relaxed, even like lifeless. You may feel your body entering in to the ground. Experience the feeling of relaxation in your whole body for a few minutes.

At the end of the exercise, do not get up suddenly. Move slightly some part of your body and then get up slowly.
First Aid and Emergency

This article explains the primary first aid rules applicable in case of disasters such as flooding or fire. It is very important that the health workers master them. But volunteers inside the community can also be trained with these guidelines to assist the health workers during the rescue operations.

ACTION AT AN EMERGENCY

The basic principles of first aid apply to all injuries or illnesses regardless of severity. Whatever the incident, it is the first aider’s responsibility to act quickly, calmly, and correctly in order to preserve life, prevent deterioration in the casualty’s condition and promote recovery. These objectives are best achieved by:

- A rapid but calm approach.
- A quick assessment of the situation and the casualty, including further risks to both victim and rescuer.
- A correct diagnosis of the condition based on the history of the incident, symptoms and signs.
- Immediate and appropriate treatment of any conditions.
- Proper transport and follow-up of the casualty according to the injury or condition.

DETERMINING THE PRIORITIES OF TREATMENT

In order to determine the condition of a casualty, check immediately:

- **AIRWAY AND BREATHING**
  Quickly check that the airway is open and that the casualty is breathing. If not, start mouth-to-mouth breathing immediately.

- **BLEEDING AND CIRCULATION**
  Check for a pulse to see if blood is being supplied to the vital organs. Check the casualty for any severe bleeding and control it.

- **UNCONSCIOUSNESS**
  Place an unconscious casualty, or one whose breathing is loud, in the recovery position and work to maintain or improve the level of consciousness. If there is any possibility of spinal injury, do not move the casualty unless difficulty in breathing makes it essential. Never give anything by mouth to a person who is unconscious.

- **SHOCK**
  Keep the casualty warm, quiet and lying down until skilled help arrives; never give anything by mouth before diagnosis.

- **OTHER NEEDS**
  Unless there is an immediate danger to life from the surroundings, treat all fractures and large wounds before moving a casualty. If the casualty is in danger, temporarily immobilize the injured part before moving.


မော်တော်သောအခြေခံချက် (Mouth To Mouth)

စာပိုဒ်ကြီးကြပ်ဝင်ကြသောအချက်များကို ဖော်ပြသည်။ အခြေခံသော နောက်ကျော်လိုက်သော နောက်တစ်ခုအတွက် ဒေသတွင် အခြေခံသော နောက်တစ်ခုကို နောက်တစ်ခုအတွက် အခြေခံသော နောက်တစ်ခုချင်းစွာ ဖော်ပြသည်။

အခြေခံသောအချက်များ:

1. ကမ္ဘာ့စာရင်းကို အချိန်အစား အပေါ်မှာ မှန်ကန်သောအရေးကာင်များကို ဖော်ပြသည်။
2. အခြေခံသောအချက်များကို ဖော်ပြသည်။
3. အခြေခံသောအချက်များကို ဖော်ပြသည်။

စာပိုဒ်ကြီးကြပ်ဝင်ကြသောအချက်များကို ဖော်ပြသည်။
MOUTH-TO-MOUTH BREATHING

This is the best method of Artificial Ventilation in ALL case where a victim is not breathing (except for cases which can affect the rescuer – poisoning). Mouth-to-nose or mouth-to-mouth-and-nose can be used.

If a person stops breathing, Begin mouth-to-mouth breathing IMMEDIATELY A PERSON CAN DIE WITHIN 4 MINUTES IF BREATHING STOPS.

Method

1. Uncover the face and clear the neck of any constraints. Quickly use a finger to remove anything stuck in the mouth or throat. Pull the tongue forward. If there is mucus in the throat, quickly try to clear it out.

2. Quickly but gently lay the person face up. Gently tilt his head back and pull his jaw forward. Support the neck as you do this.

3. Open the mouth wide, take a deep breath, pinch the nostrils together with your fingers and seal your lips around the mouth. (For mouth-to-nose, close the casualty’s mouth with your thumb and seal your lips around the nose).

4. Looking at the chest, blow into the casualty’s lungs until you can see the chest rise to maximum expansion.

5. Remove your mouth well away from the casualty’s and breathe out any excess air. Watch the chest fall and take in fresh air. Repeat inflation three times.

6. Check the casualty’s pulse to make sure the heart is beating. Presence of a pulse at the carotid artery (neck) and absence of a pulse at the wrist or ankle may indicate low blood pressure or shock.

7. Give inflation 16 to 18 times per minute.

CONTROLLING BLOOD LOSS

Controlling blood loss is to restrict the blood flow at the wound and will help clotting. This is done in two ways: by direct pressure and by elevation.
(Recovery Position)

ထိုကြောင့်လည်း ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်။ စီမံခန့်ခွဲခြင်းကို သိရှိနိုင်ပါသည်။ မိမိ၏ အထိမ်းအမှတ်ကို ပြန်လည် သိရှိနိုင်ပါသည်။ ဒီစီမံခန့်ခွဲခြင်းကို သိရှိနိုင်ပါသည်။

IV cannula အတွက် Normal saline - ရှေ့နောက် အထိမ်းအမှတ် (cc/kg) ရွေးချယ်ပါ။ Ringer နှင့် Haemaccel

ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်(IV cannula အသုံးချခြင်း)

သို့ရာတွင် အခြေခံသောအခါပေးခြင်းအတွက် အသခြားသောအခြေခံသောအခါပေးခြင်းအတွက်

လက်ရှိချက်များ

• အလေးပေး (BP) ချောင်း
• ကလေး သားကလေးကလေးအရေးကို သိရှိနိုင်ပါသည်။
• ကလေးကလေးကလေးအရေးကို သိရှိနိုင်ပါသည်။
• ဒေါ်လာပေါင်းကလေး-ဒေါ်လာပေါင်းကလေး အရေးကို သိရှိနိုင်ပါသည်။
• အလေးပေးခြင်း

ကလေးကလေး ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်။ ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်။

မိမိကို သိရှိနိုင်ပါသည်။ အဓိကဗျာနှင့် အသေးစိတ်များကို သိရှိနိုင်ပါသည်။

အသေးစိတ်များကို သိရှိနိုင်ပါသည်။

ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်။ ကြက်ကလေးအရေးကို သိရှိနိုင်ပါသည်။
Method

1. Lay the casualty down in a suitable and comfortable position. Raise the injured part as far as possible and support it. If there are gloves, wear them: keep in mind HIV/AIDS!

2. With a clean thick cloth (or your hand if there is no cloth) press directly on the wound. This direct pressure flattens the blood vessels in the area and helps to slow down the flow of blood, so that clots can form. Keep pressing until the bleeding stops. This may take 15 minutes or sometimes an hour or more. This type of direct pressure will stop the bleeding of nearly all wounds.

THE RECOVERY POSITION

Unconscious casualties who are breathing and whose hearts are beating should be placed in the recovery position. This position helps promote an open airway. It is an ideal position except for spinal injuries. If there is a significant risk of spinal cord injury, carefully re-evaluate the need to move, especially if there is only one rescuer. If all possible, wait for more assistance, then “talk out” what each person is going to do, when and who is in overall charge (this is usually the person monitoring the spinal position).

1. You should kneel upright at right angles to the casualty’s side, about nine inches away and level with the chest. Turn the head towards you and tilt it back, keeping the jaw forward in the open airway position.

2. Place the casualty’s arm nearest to you by the side. Place the casualty’s hand under the buttock, palm upwards if possible. Bring the other forearm over the front of the chest. Holding the far leg under the knee or ankle bring it towards you and cross it over the near leg.
လက်ရွေးဆိုင်ရာ လေးငါးမျိုး (open fracture) ဖြစ်စေမှုကို လေးငါးမျိုး (closed fracture) ဖြစ်စေမှုနှင့် တူညီသော အဖွဲ့စည်းပြုပြင်မှုများအတွက် သတိထားသည်။

Open fracture

Closed fracture
3. Protect and support the casualty's head with one hand. Try to maintain the "neutral" position where the head and neck are aligned with the spine. With the other hand, grasp the clothing at the hip furthest from you and pull the casualty quickly towards you. Let the victim "roll up" so that you are supporting her/him lying on her/his side up against your knees.

4. Still supporting the casualty's body against your knees, re-adjust the head to ensure that the airway is open.

5. Bend the casualty's uppermost arm into a convenient position to support the upper body.

6. Bend the casualty's uppermost leg at the knee to bring the thigh well forward so that the knee will help to support the lower body.

Carefully pull the other arm out from under the casualty, working from the shoulder down. Leave it lying parallel to the casualty rolling onto the back.
ပေါ်လာသော ရေးသားမှုကို သိရာတွင် သိရှိနိုင်သည်။ သို့သော် ရေးသားမှုသည် ၁၅ ရာခိုင်နှုန်းများစွာ ပေါ်လာသည်။ သို့သော် ရေးသားမှုသည် ကျွန်ုပ်တို့ရှိသော ပြိုလောင်းများသော အလိုအလျောက်သော အခြေခံအရေအထောက်သော အခြေစိုက်များဖြစ်သည်။ သို့သော် ရေးသားမှုသည် အခြေခံအရေအထောက်သော အခြေစိုက်များဖြစ်သည်။

ပေါ်လာသော ရေးသားမှုကို သိရာတွင် သိရှိနိုင်သည်။ သို့သော် ရေးသားမှုသည် ၁၅ ရာခိုင်နှုန်းများစွာ ပေါ်လာသည်။ သို့သော် ရေးသားမှုသည် ကျွန်ုပ်တို့ရှိသော ပြိုလောင်းများသော အလိုအလျောက်သော အခြေခံအရေအထောက်သော အခြေစိုက်များဖြစ်သည်။ သို့သော် ရေးသားမှုသည် အခြေခံအရေအထောက်သော အခြေစိုက်များဖြစ်သည်။
3. Place a sterile, unmedicated dressing over the wound, making sure it extends well beyond the edges of the wound. Press it down firmly and secure with a bandage tied firmly enough to control bleeding, but not so tight as to cut off circulation.

If bleeding continues, apply further dressings or pads and bandage firmly. Do not remove the original dressing as this may disturb clots and restart the bleeding.

**SHOCK**

In shock, the blood flow is not enough to keep the person alive. A shock can be caused by loss of blood or fluids: severe bleeding anywhere in the body or severe fluid loss (example: severe vomiting and diarrhoea, burns, …).

**Symptoms and signs:**
- Hypotension (low blood pressure).
- Cold, sweaty (“clammy”) skin is found in most shock patients.
- Fast and weak pulse.
- Fast, shallow breathing.
- Change in mental status: the patient is initially agitated, followed by confusion, then drowsiness and finally in coma.
- Low urine output.

**Treatment**

1. Immediately reassure and comfort the casualty. If the casualty’s condition allows, lay the casualty on the back on a blanket. Keep the head low and turned on one side (e.g. to maintain blood supply to the brain and to lessen the dangers of vomiting). Raise legs unless you suspect leg fractures. In that case, try to place the victim on a board and raise the foot end. Loosen any tight clothing to help the circulation and assist breathing. Keep the casualty warm. Cover the casualty with a blanket. If the casualty complains of thirst, moisten lips with water but do not give anything to drink.

2. Check breathing rate, pulse and levels of responsiveness at 10-minute intervals by asking simple questions such as “2+2=?”.

3. If the casualty’s breathing becomes difficult and vomiting seems likely or if the casualty becomes unconscious, place in the recovery position.

4. Replace loss: put in 2 iv cannulas (biggest possible); give normal saline, 1-2 litres in an hour or 20 cc/kg stat. There is no advantage in using Ringer or Haemaccel and they are much more expensive. The important thing is to give fluids quickly and in big amounts.

5. In case of bleeding: stop the bleeding and give blood (run the i/v fast, several units as necessary).

6. If you cannot stop the bleeding, transport as soon and as safely as possible to a hospital.

**FRACTURES**

A fracture is a broken or cracked bone.

(See Issue 6)

**Treatment**

1. Remember that difficulty in breathing, severe bleeding, shock and unconsciousness must be dealt with before a fracture.

2. When a bone is broken, the most important thing to do is to keep the bone in a fixed position. This prevents further damage. Mending can only occur once it has been returned to and supported in the normal position.

3. Before trying to move or carry a person with a broken bone, keep the bones from moving with splints, strips of bark, or a sleeve of cardboard. Later a plaster cast can be put on the limb at a health centre.
ဗိုလ်ချီ

ဗိုလ်ချီမှာ အရေးကြီးသောသဘောတူညီချက်တစ်ခုဖြစ်ပါတယ်။ အရေးကြီးသောသဘောတူညီချက်ကို အခြေခံပါ။

- အိပ်မံသော အသက်ရှင်များအတွက် အိပ်ပြုစုပြီး လေ့လာကြည့်ပါ။
- အသက်ရှင်များအတွက် အိပ်ပြုစုပြီး လေ့လာကြည့်ပါ။
- ဝါရှင်များသည် အိပ်ပြုစုပြီး လေ့လာကြည့်ပါ။
- ဝါရှင်များသည် အိပ်ပြုစုပြီး လေ့လာကြည့်ပါ။
- အိပ်မှုကို သောက်ကူးပြီး လေ့လာကြည့်ပါ။
- အိပ်မှုကို သောက်ကူးပြီး လေ့လာကြည့်ပါ။
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- အိပ်မှုကို သောက်ကူးပြီး လေ့လာကြည့်ပါ။
- အိပ်မှုကို သောက်ကူးပြီး လေ့လာကြည့်ပါ။
4. Setting broken bones: if the bones seems more or less in the right position, it is better not to move them, this could do more harm than good. If the bones are far out of position and the break is recent, you can try to set or straighten them before putting on a cast. The sooner the bones are set, the easier it will be. Before setting, if possible, inject or give diazepam to relax the muscles and lower pain or give codeine.

5. A broken upper leg or hip often needs special attention. It is best to splint the whole body like this:

6. Broken bones that break through the skin (open fracture): since the danger of infection is very great in these cases, the wound and the exposed bone have to be cleaned very gently but thoroughly with cool, boiled water and then covered with a clean cloth. **Never put the bone back into the wound until the wound and the bone are absolutely clean.** Splint the limb in place to prevent more injury. Use an antibiotic to help prevent infection.

**BURNS AND SCALDS CAUSED BY FIRE**

**Treatment**

1. **MINOR BURNS THAT DO NOT FORM BLISTER (1st degree):** reassure the casualty. Place the injured part under slowly running cold water or immerse it in cold water for 10 minutes – longer if the pain persists. If no cold water is available, then any cold, harmless liquid such as milk or beer can be used instead. Give aspirin for pain!

2. **BURNS THAT CAUSE BLISTERS (2nd degree)**
   - Do not break the blister.
   - If the blisters are broken, wash gently with soap and boiled water that has been cooled. Sterilize a little vaseline by heating it until it boils and spread it on a piece of sterile gauze. Then put the gauze on the burn. If there is no

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**HOW TO SET A BROKEN WRIST:**

Pull the hand with a slow, steady force for 5 to 10 minutes, increasing the force to separate the bones.

With one person still pulling the hand, have another gently line up and straighten the bones.

**WARNING:** It is possible to do a lot of damage while trying to set a bone. (veins, arteries and nerves can be cut). It should be done only with the direction of someone with experience, unless there is a strong reason. Do not jerk or force.
vaseline, leave the burn uncovered. Never smear on grease or fat.

- If signs of infection appear (pus, bad smell, fever, or swollen lymph nodes) apply compresses of warm salt water (1 teaspoon salt to 1 litre water) 3 times a day (if possible, add 2 tablespoons of bleach to the salt water). Boil both the water and the cloth before use. With great care remove the dead skin and flesh. You can spread on a little antibiotic ointment. In severe cases, consider giving an antibiotic such as penicillin or ampicillin.

3. DEEP BURNS (3rd degree)
- These burns that destroy the skin and expose raw or charred flesh are always serious. Take the person to the health centre at once, and in the meantime wrap the burned part with a very clean cloth or towel.
- If this is not possible, treat the burn as described above. If you do not have vaseline, leave the burn in the open air under a mosquito net to protect it from dust and flies. Keep the cloth very clean and change it each time it gets dirty with liquid or blood from the burn. Give penicillin.
- Give the burned person plenty of liquid. If the burned area is large (more than twice the size of his hand) give ORS. The burned person should drink this as often as possible, especially until he urinates frequently. He should try to drink 4 litres a day for a large burn, and 12 litres a day for a very large burn.

- It is important for persons who are badly burned to eat foods rich in protein.

It is important to keep the burn as clean as possible. Protect it from dirt, dust and flies.

HYPOTHERMIA

This is a condition which develops when the body temperature falls below about 35°C (95°F). This happens often in case of floods, when people stay in water for a long time.

NEVER ASSUME THAT A CASUALTY SUFFERING FROM HYPOTHERMIA IS DEAD EVEN IF BREATHING AND HEARTBEAT APPEAR ABSENT.

Treatment

1. If dry clothing is available, ask the patient to change clothes. If no dry clothing is available, leave wet clothes on and cover the victim with waterproof material and additional insulation if available.
2. Give the victim a hot sweet drink, if conscious.
3. Wrap blankets around the patient covering the body, head and neck but not the face and lay him down.

If the casualty is unconscious, place in the recovery position.

Do not place his hands or arms in direct contact with the body as this draws heat off the body.

4. If medical help is not readily available, apply gentle heat to the patient to prevent a further drop in temperature. Place hot water bottles wrapped in a towel or clothing on to the casualty's trunk but not the extremities.
DROWNING

A person who has stopped breathing has only 4 minutes to live! You must act fast!

Start mouth-to-mouth breathing at once – if possible, even before the patient is out of water.

If you cannot blow air into his lungs, when you reach the shore, quickly put him on his side with his head lower than his feet and push his belly upward with your hand between his navel and ribs to expel the water out of his chest. Then continue mouth-to-mouth breathing at once.

ALWAYS START MOUTH-TO-MOUTH BREATHING AT ONCE before trying to get water out of the drowning victim’s chest.

THE USE OF THE STRETCHER:

The stretcher must be put down near the injured person. If no stretcher is available, one can be improvised with blankets, pieces of cloth or plastic, camp beds, ladders, doors, shutters, etc...

When lifting the injured person, certain rules must be followed:

- Movements must be calm and co-ordinated and carried out in accordance with the instructions of the rescue worker.
- The injured person must be moved as little as possible.
- The victim’s head, neck and trunk must be kept in the same axis (see figure).

Transport by stretcher to the local health centre must follow certain simple, common sense rules:

- The stretcher must go forward with the patient’s head foremost.
- Jerkiness must be avoided (no sudden stops, bump or tilting).
- No stretcher-bearer should walk backward.
- The injured person, together with any ventilation equipment, must be fastened to the stretcher.
- If the victim is being given artificial respiration (mouth-to-mouth, mask), the rescue worker responsible for it will get between the two shafts level with the victim’s head; it is only in such a case, to avoid having the rescue worker walk backwards, that the injured person will be transported feet first.

REFERENCE

2. Where there is no doctor (1996) By David Werner
http://www.who.int/disasters/sitrep.cfm

(6) နေ့စဉ်ကြည့်ရှုရည်ရွယ်ချက်
(7) လွန်ခဲ့သောကြည့်ရှုရည်ရွယ်ချက်
(8) ပြင်ဆင်ခြင်း
(9) ကြည့်ရှုရည်ရွယ်ချက်
(10) ပစ္စည်းများ၏ လိုအပ်ချက်
(11) လိုအပ်ချက်
(12) အကြမ်းဖမ်းပြုခြင်း
Rapid Health Assessment

After a disaster, aid sent from outside is often not appropriate for the needs of the victims and can even prove dangerous. Therefore, it is important to assess those needs carefully so that an effective aid can be set up. Health workers in the field are the best equipped to take over this task. This article explains the steps to do a rapid health assessment after a disaster in order to prepare an appropriate response.

Once an emergency occurs, collecting information on the needs of the population is critical for an effective, appropriate and rapid response. A rapid health assessment to measure damage and identify basic needs of the population can effectively reduce suffering and bring the lives of those affected back to normal as quickly as possible.

The information produced by an assessment is used for decision-making. The main purposes of a rapid assessment are:

- To confirm the emergency.
- To describe the type, impact and possible evolution of the emergency.
- To measure its present and potential health impact.
- To assess the adequacy of existing response capacity and immediate additional needs.
- To recommend priority action for immediate response.

A rapid health assessment of the situation can be a complex task, and it is best done using experienced teams. However, in many situations a life-saving response cannot wait for an expert team. Standardized forms, already designed, are very helpful in dealing with this challenging task. One such form is included in Appendix A. It is also available on the internet:

http://www.who.int/disasters/sitrep.cfm

The schedule of activities for rapid health assessment can be divided into three phases:

1) Emergency preparedness
2) Initial assessment and
3) Rapid health assessment.

1. Emergency Preparedness: What do I do before the emergency occurs?

To help ensure an effective rapid health assessment, a number of preparedness activities should take place. First, key players should meet and agree on which rapid health assessment tools will be used in the event of an emergency. They should agree on who should receive information that will be gathered. They should discuss under what circumstances a rapid health assessment should be conducted and who should do it.

Other emergency preparedness activities include:

- Obtain maps of the area, especially those maps which show settlements, water sources, main transport routes and health facilities. These should be periodically updated.
- Agree to and keep open communication channels between all relevant players.
- Maintain networks for mobilizing personnel and resources to conduct the rapid health assessment.
• Determine lines of authority regarding the rapid health assessment.
• Identify persons who are familiar with conducting a rapid health assessment and can be called on, in the event of an emergency.

Ideally, this emergency preparedness for rapid health assessment should be done with all players who will be involved in an emergency.

2. Initial Assessment: An emergency has occurred……what’s the first thing I do?

In the first few hours, immediately after an emergency, a pre-assessment situation report is needed. This report should give as much information as possible about the emergency based on a quick preliminary inspection of the area. This can be done by a drive or walk through.

The questions to be answered in the brief assessment are: What happened? Where did it happen? When did it happen? Is a rapid health assessment needed?

If the answer to the last question is “yes,” earlier plans, developed during emergency preparedness activities, should be implemented. The person who will lead the rapid health assessment should be identified and logistics arranged.

3. Rapid Health Assessment: a rapid health assessment has been recommended...what should it include?...how should it be done?

In the first days following an emergency, a rapid health assessment should be conducted, if warranted. This will consist of a visual inspection of the affected area and interviews with key people.

A form for collecting data, such as the one in Appendix A, should be used. The purpose of this information gathering is to confirm the emergency, measure its impact, identify health needs and guide responses.

Information collected from the interviews should include:
• the interviewees’ perception of the event (cause and dynamics).
• pre-emergency conditions in the area.
• geographical distribution and size of the population.
• age and sex distribution of the population and average household size.
• adequacy of security and prevalence of violence.
• current morbidity and death rates and causes.
• current food supplies, recent food distribution, and future food needs.
• current supply and quality of water.
• current adequacy of sanitation.
• other priority needs of the affected population, such as shelter and clothing.
• current status of transport, fuel, communication, and other logistic necessities.
• current resources available in the affected community, including medical equipment, drugs and personnel.

Answers to the following questions should be provided:
Is there an emergency?
What is the main health problem?
What needs exist?
နောက်ဆုံးကြည့်စုစုပေါင်းအနေဖြင့် တိုက်ရိုက်လေးလိုက် ပြောင်းလဲလိုတာကို ပြုလုပ်ပေးခဲ့ပါမည်။

ဒေါ်ကြီးဗျူဟာနှင့် မိုးကြူးကုန်းများအတွက် သူ့လိုအပ်ချက်များကို ပြောင်းလဲထားသည်။

http://www.who.int/disasters/sitrep/ ref-val.htm

http://www.who.int/disasters

ယောက်ခီးနှင့်တိုးပြောင်းထားသော စီမံကိန်းချက် အချက်အလက်များအတွက် ပါဝင်သော စီမံကိန်းချက်များ

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။

စီမံကိန်းချက်များအတွက် မိုးကြူးကုန်းများ ဖော်ပြထားသည်။
What is the existing local capacity to respond to such needs?
What resources must be brought in?
What constraints (e.g. blocked roads) exist?
What decisions need to be made?
What information is needed to make these decisions?

What to do with the information gathered?

When information has been gathered, it should be compiled into a report which includes:

.....reason for emergency (type of actual or imminent hazard). Give onset and evolution and additional hazards.

.....description of affected areas, adding a sketch map.

.....description of affected population (number, estimated breakdown by age, sex and special risk or vulnerability factors, as well as estimated deaths and injuries).

.....description of the impact, in terms of mortality and morbidity.

.....description of existing response capacity, in terms of human and material resources.

.....list of immediate vital needs of the population and recommendations for priority actions.

This information should be distributed as agreed upon in the emergency preparedness planning. If not done beforehand, the key players now need to agree on the distribution of the information.

In some cases, especially if deaths have occurred, there may be multiple government and non-governmental organizations able and willing to assist with the emergency. Though the help may be needed, additional players create the challenge of added coordination — during a period when there is little extra time for such activities. By agreeing beforehand to use a common tool for ease of sharing information, a great deal of coordination is already accomplished.

The advantages of using a standard template, such as the one in Appendix A, are that it is quicker, helps ensure all important items of information are included and consolidates information from different sources into a single document.

To help interpret the findings from a health assessment and draw conclusions as to the needs, reference values can help. Reference values are standards for selected indicators. For example, the reference values can give information on the normal calories needed for various members of the population.

Reference values have also been included in Appendix B and are also available on the World Health Organization’s website:

http://www.who.int/disasters/sitrep/ref-val.htm

A number of helpful tools and information for conducting a rapid health assessment or other activities during an emergency are available at the World Health Organization EHA website:

http://www.who.int/disasters

Bibliography

APPENDIX A

First Situation Report
Sitep No #
Location (country, region/area affected):
Organisation:
Covering period (from .... to ....)
Date of transmission:
Prepared by:
Cleared/authorized by:

1. Executive Summary: main problems & needs, the likely evolution, the local response capacity and the additional requirements.

2. Main Issue
   2.1 Nature of the emergency:
       - Main causative hazard
       - Additional hazards
       - Projected evolution
       - Others as relevant
   2.2 The affected area:
       - Administrative division
       - Access to area:
       - Main routes and their conditions
       - Distance from the closest town outside the affected area
       - Closest operational airport, port or navigable river
       - Other information as relevant to the access
   2.3 The affected population:
       - Characteristics (e.g. residents, refugees, IDPs)
       - Number/estimates
       - Sex/age breakdown
       - Patterns of settlement/movement
       - Source of information and method of data collection

3. Health Impact
   3.1 The direct impact - reasons for alert:
       - The three main causes of morbidity and mortality*
       - CMR (specify formula utilised)
       - Is the CMR exceeding the threshold of 1 x 10,000 per day?
       - Under-5 mortality rate
       - Is the Under-5 MR exceeding the threshold of 2 x 10,000 per day?
       - Is acute malnutrition present*?
       - If yes, which population groups are more at risk?
       - Is malnutrition exceeding the threshold of 5-10%=moderate; >10% severe?
       - Reports/rumours of outbreak*:
         - Likely diagnostic
         - Case definition utilized
   3.2 Other reasons for concern (e.g. traumas/injuries due to landmines, etc.)
   3.3 Indirect health impact (e.g. damage to water plants, other vital infrastructures or lifelines)
   3.4 Pre-emergency baseline morbidity and mortality data, when available:
   3.5 Projected evolution of the health situation: main causes of concern in the coming months

4. Vital needs. The current situation:
   4.1 Water
   4.2 Excreta disposal
   4.3 Food
   4.4 Shelter and environment on site
   4.5 Soap and buckets
   4.6 Fuel and cooking utensils
   4.7 Others vital needs (e.g., clothing and blankets)

5. Critical constraints
   5.1 Security
   5.2 Transport and logistics
   5.3 Social/political and geographical constraints
   5.4 Other constraints

6. Response capacity - resources that are functioning and close to the affected area:
   6.1 Activities already underway
       - Measles coverage
       - Others
   6.2 National contingency plans, procedures, guidelines and special expertise
   6.3 Operational support
       - Location of forward field control post
       - National system (MOH) - closest functioning health unit and referral system
       - External assistance - closest organisation/agency and relevant resources
       - Capacity for reprogramming the resources above
       - State of communications - good/fair/insufficient
       - Storage capacity close to affected area and supply lines
   6.4 Operational coordination:
       - Lead agency
       - Mechanisms
       - Flows of information - good/fair/insufficient
   6.5 Strategic coordination
       - Relations between government and UN country team
       - National institutions for emergency management
       - Standing agreements with neighbouring countries
       - Relations between government and international community at large

7. Conclusions:
   7.1 Are the current levels of mortality and morbidity above the average for this area and this time of the year?
   7.2 Are the current levels of mortality, morbidity, nutrition, water, sanitation, shelter and health care acceptable by international standards?
   7.3 Is a further increase in mortality expected in the next two weeks?

8. Recommendations for immediate action:
   8.1 What must be put in place as soon as possible* to reduce avoidable mortality and morbidity?
   8.2 Which activities must be implemented for this to happen?
   8.3 What are the risks to be monitored?
   8.4 How can we monitor them?
   8.5 Which inputs are needed to implement all this (8.2-8.4)?
   8.6 Who will be doing what?

9. Emergency contacts: (only those relevant to the recipients of the sitrep; e.g. contact details of local donor representatives, MoH counterparts, etc.)
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# APPENDIX B

**First Needs Assessment Situation Report**

Reference values in health emergency

The following table of reference values aims at helping in the interpretation of the findings from the rapid health assessment and in drawing the conclusions and recommendations for the first sitrep. The values are presented according to the specific items of the sitrep template[1].

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<td></td>
<td>individual level, total or nutritional oedema:</td>
<td>&lt;= 3Z to &lt;2Z scores WH or 70-80% median or 11.0 to &lt;12.5 cm MUAC</td>
</tr>
<tr>
<td></td>
<td>- Children 6-59.9 months</td>
<td>&lt;= 3Z to &lt;2Z scores WH or &lt;70% median or &lt;11.0cm MUAC +/- or nutritional oedema</td>
</tr>
<tr>
<td></td>
<td>individual level, moderate or - Children 6-59.9 months</td>
<td>Serious: 10-14% below median or &lt;2Z scores</td>
</tr>
<tr>
<td></td>
<td>individual level, severe or - Children 6-59.9 months</td>
<td>Critical: &lt;= 15%</td>
</tr>
<tr>
<td></td>
<td>Severity (aggregate level) for under-5 Growth Fattening Rate in Under-5</td>
<td>30% of monitored children</td>
</tr>
<tr>
<td></td>
<td>Low Weight at Birth (&lt; 2.5 kg)</td>
<td>7% of live births</td>
</tr>
<tr>
<td>4.1</td>
<td>Water - Quantity</td>
<td>15 litres per person per day</td>
</tr>
<tr>
<td></td>
<td>- Access</td>
<td>1 water point per 250 people</td>
</tr>
<tr>
<td></td>
<td>- Distance</td>
<td>No more than 500 metres from housing</td>
</tr>
<tr>
<td></td>
<td>- Quality</td>
<td>No more than 10 faecal coliforms per 100 ml at the point of delivery</td>
</tr>
<tr>
<td></td>
<td>- Storage</td>
<td>For household: 2 water vessels of 10-20 litres</td>
</tr>
<tr>
<td></td>
<td>- Facilities</td>
<td>1 washing basin per 100 people</td>
</tr>
<tr>
<td>4.2</td>
<td>Excreta disposal - Access to toilets</td>
<td>No more than 20 people per toilet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toilets no more than 50 metres from housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toilets segregated by sex</td>
</tr>
<tr>
<td>4.3</td>
<td>Food - Food aid requirements</td>
<td>2,100 Kcal per person per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10-12% of total energy by protein</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17% of total energy from fat</td>
</tr>
<tr>
<td>4.4</td>
<td>Shelter - Covered area</td>
<td>3.5-4.5 m² per person</td>
</tr>
<tr>
<td>4.5</td>
<td>Soap - Availability</td>
<td>250 gr. Per person per month</td>
</tr>
<tr>
<td>4.6</td>
<td>Fuel for cooking - Availability</td>
<td>15 kg of firewood per household per day</td>
</tr>
<tr>
<td>6.1</td>
<td>Measles coverage - Coverage</td>
<td>90% for 6m-12y</td>
</tr>
</tbody>
</table>

[1] A more complete list of reference values, as well as a discussion on their use and limitations, is given by the Humanitarian Charter and Minimum Standards in Disaster Response, the Sphere Project. Reference values for rapid health assessment are presented in the following WHO documents: Rapid Health Assessment Protocols for Emergencies and the Handbook for emergency Field Operations.

[2] The demographic profile can vary largely across populations; the following breakdown is from WFP, UNHCR and WHO. This average profile should be cross-checked with local estimates, if available.
 Sphere စိန်ခေါင် - ခရစ်နှစ်များကို အခြေခံသော စိန်ခေါင် များအားလုံးကို ထိန်းချုပ်နိုင်သည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။

ပြင်းထန်ပြောင်းကြသော အခြေခံချက်များကို မြင်ရပြီး ထိန်းချုပ်နိုင်သည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။
• စိန်ခေါင်ကို မြေကို အနေနှင့် စိန်ခေါင်ကို ဆိုသည်။

After a fire in a Karenni refugee camp.
Fire Precautions

Almost every year, there are fire outbreaks in Burmese or Thai towns. In April 2003, 2 houses were destroyed by fire in one refugee camp in Mae Hong Son Province. This article serves remind the community of the main fire precautions.

Refugee camps and towns constructed from combustible materials (e.g. wood) are particularly vulnerable to the hazard of uncontrolled fires. To manage the risk, it is important to raise awareness of potential fire hazards and draw up contingency plans to deal with fire.

- When building a new settlement, it is important to leave sufficient space between houses, shelters and buildings of any kind to create fire breaks, escape routes and emergency access. A fire break is a strip of open land serving to arrest the advance of a fire. A rough rule is for the width of the firebreak to be twice the height of the tallest adjacent building. This is so that if a building falls over due to fire, it will not collapse onto an adjacent building and set it a light.

<table>
<thead>
<tr>
<th>Sphere standard (for building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Humanitarian Assistance</td>
</tr>
<tr>
<td>Common Standards and temporary settlement indicators suggest:</td>
</tr>
<tr>
<td>• 2 m between dwellings/houses</td>
</tr>
<tr>
<td>• 6 m between clusters of dwellings/houses</td>
</tr>
<tr>
<td>• 15 m between blocks of clusters</td>
</tr>
</tbody>
</table>

As the farmers may burn vegetation in the dry season, firebreaks around the village (or camp) can protect it against bush fires.

- Prepare contingency plans (see contingency plan article). If people know in advance what to do when a fire breaks out, they are more likely to react quickly, correctly and safely.
Check safety of cooking utensils in all houses. (Source IRC)
• Establish a fire warning system and make it known to everyone. Consider establishing a fire fighting squad equipped with suitable implements - shovels, beaters, sand buckets, etc.

Water is not normally of much use on major fires, due to the lack of sufficient quantity and pressure.

• Have each house equipped with a long pole to beat out flames, and a hook to pull burning material off the roof. Have the community regularly inspect the houses to check these tools.

• Highlight the dangers of careless cooking. Make regular controls - have the community check regularly that the cooking equipment of each house is not dangerous.

Throwing water onto burning oil spreads it! A wet cloth or towel should be thrown over to starve it of oxygen.

• Do not allow rubbish to accumulate or to be burnt within a settlement. Remove rubbish to a remote location to burn or bury.

It is essential to stop a fire spreading. If a fire is out of control, it is usually better to try to contain it rather than fight it. Therefore, suggested procedure in the event of fire is:

1. Raise the alarm.
2. Quickly evacuate people and animals from danger.
3. Check that all houses at risk or to be pulled down have no occupants, especially children and the elderly.
4. Contain the fire by pulling down lines of houses, fences, etc. to form a firebreak.
Clean latrine pan with brush
Water Improvement and Diseases in Emergencies
Quyen Tran, International Rescue Committee - Thai-Barma Programme

This article describes the basic methods to avoid the problems resulting from drinking or using unclean water.

Basic Household Water Treatment System

- Water related diseases are the major cause of sickness and death in emergencies.
- Usually in an emergency as well as in a non-emergency situation in a developing country setting, providing clean and safe drinking water is very important to improving the health and well-being of the people.
- Setting up large and complex water treatment systems usually takes a long time and requires enormous amounts of resource, which are usually lacking.
- A basic household treatment system is usually ideal for this situation because it is relatively low cost and simple to set up and use.

After an emergency, it is important to set up latrines for the homeless victims.

Use of latrines helps prevent many sicknesses

The latrines should be built more than 20 meters away from:
HOUSES – WELLS - SPRINGS - RIVERS or STREAMS

Trench Latrines:
For the immediate aftermath of a disaster, the trench latrines are the cheapest, easiest and quickest latrines to set up, even for a large population.

Two areas (one for males, one for females) are divided into 1.5m wide strips with poles and tapes (or fences). Shallow trenches about 150mm deep are dug along one side of the strip. After use, excreta should be covered with loose soil to prevent flies from breeding and reduce smells. Hand-washing facilities should be available near to the exit. The latrines require strict supervision and management. Come back to proper long-term pit latrines as soon as possible.

KEEP THE LATRINES CLEAN
Three-Bucket Household Water Storage Scheme

Water stored for several days can sufficiently reduce the number of disease causing bacteria.

Household Storage and Ultraviolet Water Treatment Scheme
**Household Water Storage Chlorination Scheme**

RAW WATER → 1% chlorine solution → 30 MINUTES LATER → water is chlorinated and safe to drink.

**Single-Bucket Household Sand Filter Scheme**

Household sand filter is relatively effective in removing most disease causing bacteria.
Near Myawaddy, a border town in Burma, there is a beautiful green village hamlet named Zwe-ka-pin long village. Ma Ni, a 4th grade student resides at that village and helps at her mother's grocery shop.

One day, a young woman, who is one of Ma Ni's close relatives, came to her shop. She was holding a comic book under her arm.

Ma Ni is interested in reading all kinds of comics. So she borrowed the comic book from her sister and planned to read it before going to bed. She lighted a candle on her wooden box so as to read the comic book.

Due to hard work during the day time, she fell asleep in a sitting position leaning on the wooden box where she had set the lighted candle.

During her sleep, she accidently pushed the candle, setting fire to the books on her wooden box. Then the fire spread to the mosquito net, mattress, blankets and pillows and the blaze became larger and larger.
Starting from Ma Ni's house, the fire spread from one house to another and finally, almost all the houses in her village were destroyed. Her left arm and left leg were also badly burnt.

When ever caught in a fire, always remember to:

STOP

DROP

ROLL

What should you do, if your clothes catch fire?

The answer is... "STOP", "DROP" and "ROLL"

If your clothes catch fire, always remember:

1. Do not panic and run, but stop.
2. Drop down immediately.
3. Roll over and over.

(to put out the flames by removing oxygen)