

# MARITIME SAFETY

## Handbook for CCADs

**Philippine Coast Guard Auxiliary**
**Maritime Safety Handbook**

**April 2018**

**PHILIPPINE COAST GUARD AUXILIARY**
**Units 8 & 9**
**CCP Bay Terminal, CCP Complex**
**Pasay City PHILIPPINES**



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## FOREWORD

The Philippine Coast Guard Auxiliary (PCGA) is a civilian volunteer organization initially established for the purpose of assisting the Philippine Coast Guard (PCG) in the conduct of search and rescue at sea. Through the mandate of PCG Law of 2009, under Section 11 of R.A. 9993, the PCGA is now a nationwide organization headed by its National Director (ND) with Maritime Safety (MARSAF) as one of its arms to promote safety of life and property at sea in implementing maritime safety rules and regulations.

The PCGA actively assists the PCG particularly that of providing courses, seminars and workshops on water safety such as on boat handling, typhoon doctrines and search for SAR units of local governments and non-government organizations. Recipients of the training and workshops are the "piscadores" or fishermen and folks from coastal communities whose livelihood is dependent on fishing and small boat travel. Because of their proximity to sea and day-to-day activities, they play a vital role in promoting safety of life and property at sea by being the first to give information on sea mishaps.

The PCGA, through MARSAF is in the frontline, resolute and dedicated in carrying out its ultimate task of ensuring the preservation of the Philippine seas as well as being a safe place for lives and properties.

Special thanks to the brave men and women who volunteered to dedicate their life to this noble task.

**VADM VALENTIN B PRIETO JR PCGA**
**NATIONAL DIRECTOR**

# I. INTRODUCTION

Seafaring is probably the most dangerous occupation in the world. Everyone knows that there is an element of risk, the risk of death is always present, and everyone wants to stay safe. More than 50% of the world's population live away from the shoreline. Billions of people are depending on the scarce marine resources. A lost vessel has a vital impact on the coastal community and the whole maritime economy as well.

Safety and survival are of primary concern of every fisherman. It does not matter whether one is employed on fishing boats, small ship or large ships. Reports on casualties in some cases may be due to people's lack of knowledge about survival techniques. They tend to panic and do not know what to do at all.

While in training and working on board, maritime safety is the most important factor to observe It is vital to avoid accidents that may result to personal injury, damage to property and environment, or untimely death.

Maritime safety and security is one of the primary missions of the Philippine Coast Guard which concerns the: Protection of lives and property at sea by implementing the SOLAS (Safety of Life at Sea) rules and regulations Implement life-saving management to all forms of waterborne transportations in navigable waters from accidents.

To assist in carrying out this mandate, the Philippine Coast Guard Auxiliary set as presented in this handbook, three (3) maritime safety mandatory projects which include the following:

- Coastal Community Evacuation Drill
- Basic Boat Handling and Rules of the Road Training
- Basic Life Support Training



# II. MARITIME SAFETY MANDATORY PROJECTS

The Philippines is considered one of the most disaster prone areas in the world due to its location in the Pacific Ring of Fire and in Western Pacific. Disasters as a result of exposure to a hazard event such as, typhoon, flood, landslide, earthquake, tsunami and volcano eruption have caused the loss of lives, damage to properties, disruption to the economy and environmental degradation. To be able to anticipate and cope with all hazards, disaster preparedness is an imperative for coastal communities. Disaster preparedness includes trainings, simulations, evacuation drills, and other response and recovery exercises.

Things to remember about disaster preparedness:

- Environment hazards;
- What to do in time of emergency;
- Emergency communication;
- Correct information; and
- Emergency survival kit

## A. COASTAL COMMUNITY EVACUATION DRILL

### 1. Environment Hazards

- Typhoons and tropical storms - dangers include Strong winds -may reach 250 Km/h
  - Heavy Rain – may cause flooding
  - Storm Surge – causing high waves
  - Landslide / Mudflow – due to heavy rains
  - (See Annex A. PAGASA's Revised Storm Warning System and Annex B. Color-Coded Rainfall Advisories)

- Inter Tropical Convergence Zone, or ITCZ - When SE'ly winds meet NE'ly Trade winds. It is characterized by convective activity which generates often vigorous thunderstorms over large areas.

- Thunderstorm - Approaching thunderstorm is characterized by dark cauliflower like clouds formation usually cause heavy rain, lightning, thunder, hail and strong winds (See Annex C Thunderstorm Warning System)

- Lightning - Electrostatic discharge during a thunderstorm. If out on open water or too far from shore and shelter, it's time to hunker down and ride it out.

- Flood - types of flood River flood – river overflow
  - Coastal flood – rise of water due to storm surge, high tide or tsunami
  - Flashflood – sudden rise of water due to continuous heavy rain

- Earthquake - Possible earthquake origin in the country include Phil. Fault Zone
  - Manila Trench
  - Negros Trench
  - Cotabato Trench
  - Valley Fault System
  - Phil. Trench
  - Sulu Trench

  (See Annex D. Distribution of Active Faults and Trenches in the Philippines):

- Tsunami - Tsunami or tidal wave, also known as a seismic sea wave, is a series of waves in a water body caused by the displacement of a large volume of water, generally in an ocean or a large lake.

- Storm Surge ("Daluyong") - The abnormal rise of sea level along the coast caused by the onshore winds of a storm (See Annex E. Storm Surge Color-coded Warning System)

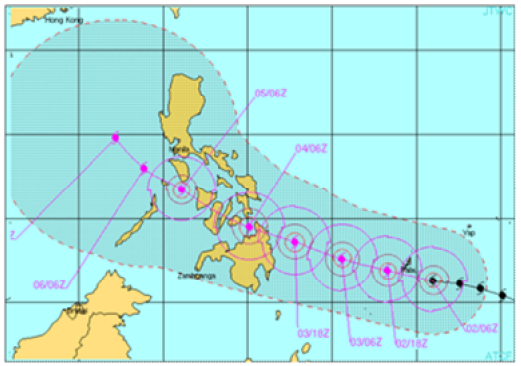


- Volcano eruption -
  - Direct dangers: Pyroclastic flow, lava flow, ashfall and volcanic gas
  - Indirect dangers: lahar, tsunami, volcanic landslide and fissuring

- Landslide - Causes of Landslide
  - Too much water during/after heavy rain fall;
  - Deforestation;
  - Earthquakes; and volcanic activity

## 2. Guidelines for Coastal Community Disaster Preparedness

- Know the disaster threats in your area (e.g. typhoon path, faults, etc.)



- Equip yourself with knowledge and skills on disaster preparedness. Know preventive measures and safety before, during and after a hazard event (Refer to Annex F). Make a regular evacuation drill / exercises.

2. Prepare your **Disaster Emergency Plan** based on your unique situation. Review your evacuation plan regularly (i.e., below).



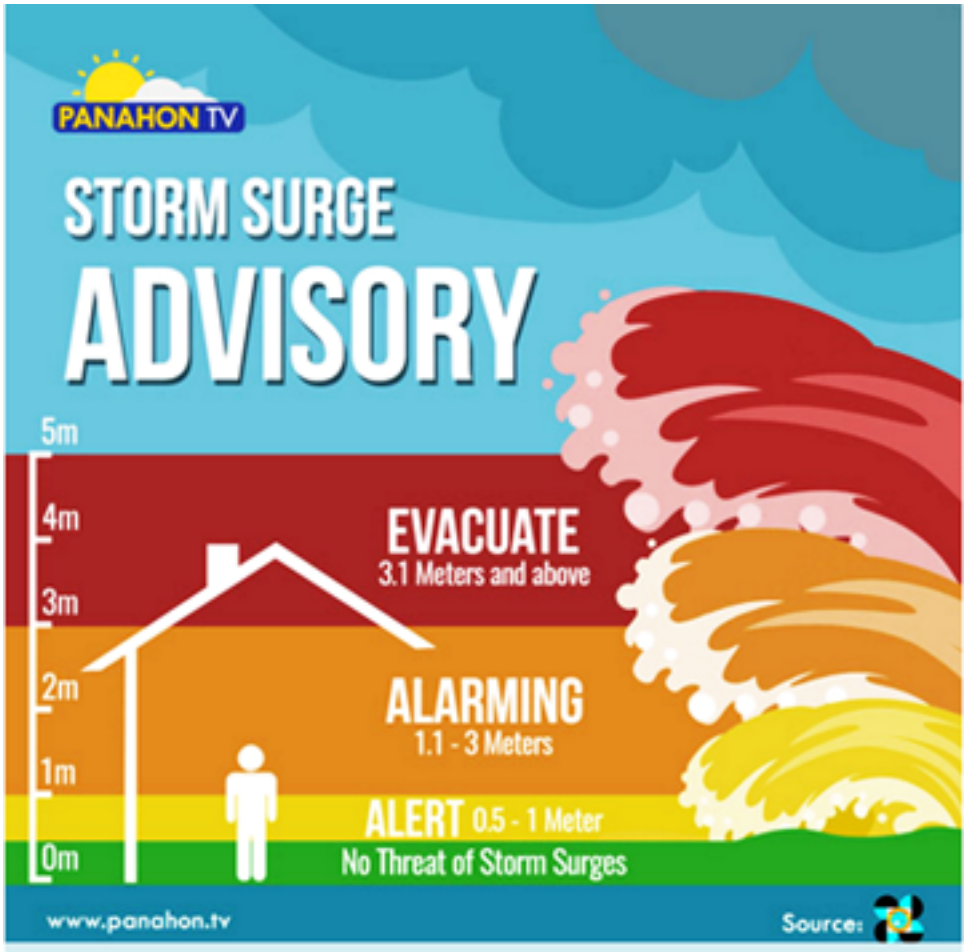

3. Secure your home prior to evacuation.

4. Prepare basic emergency supplies (i.e. food, water, medicines, first aid kit, flashlight, transistor radio, etc).

5. Prepare to communicate with local officials. Bring two-way radios or a transistor radio for broadcasting and weather information update.

6. If you must evacuate to a disaster shelter/ evacuation centers, be aware that they will only allow service animals for persons with disabilities.

7. When disaster strikes, stay calm and alert. Look around and carefully assess the situation.






8. Severe storms can cause landslides or flooding. Avoid lower elevation streets, drainage channels, and other areas that may flood.

9. If you are on a coastal community or near a river and observed the water ascending in an unusually rapid manner, immediately evacuate to a higher ground.

10. If local officials issue evacuation orders, use the evacuation routes and methods specified.

### 3. Guidelines on Evacuation Drill

The following are steps to follow during a community evacuation drill:

1. Activate or sound the siren or general alarm.
2. Grab your emergency Go Bag or survival kit and proceed to designated assembly area.


3. Make a roll call and ensure that everybody is accounted for. Give instructions where to proceed.
4. Find out if you live, work or play in a tsunami hazard area.



5. Follow instructions, signage and directions made by authorities.
6. Proceed to higher grounds and unto the evacuation area.
7. Use boats or bancas to transport the affected families.
8. Use trucks, cars, etc. to transport evacuees to evacuation centers.

9. Stay in the designated evacuation centers in your area and await for further instructions. Conduct de-briefing.

*https://www.worldvision.org/press-release/world-vision-responding-super-typhoon-haiyan-continues-pound-region*

## B. Standard Operating Procedures During Typhoons and Severe Weather Conditions

The following are four-steps standard procedures for CGADs and Auxiliary Squadrons in the conduct of pre and post typhoon and other calamities operations. This will be in coordination with the PCG District Stations/ Substations and LGUs.

1. Assist in / conduct pre-emptive coastal evacuation operations.


2. Assist in/ conduct Stranded Passengers Assistance (SPA) operations for marginalized stranded passengers in seaports (ex: transport & snacks, etc.)



3. Assist in/conduct search and rescue or retrieval operations


4. Conduct post-storm operations through relief distribution, medical aid, etc.

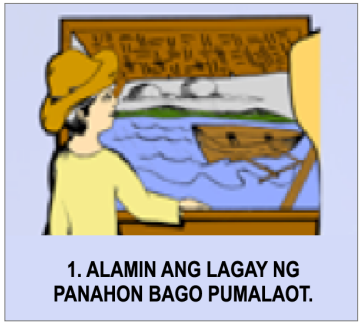

## II. BASIC BOAT HANDLING AND RULES OF THE ROAD TRAINING

### A. MARITIME SAFETY GUIDELINES

**1. Reminders to Fishermen During Rainy Days and Typhoon**

*(Source: Philippine Coast Guard. Poster on "Paalala sa mga Mangingisda sa Panahon ng Tag-ulan at Bagyo")*

a) Check the weather condition before sailing out to sea.

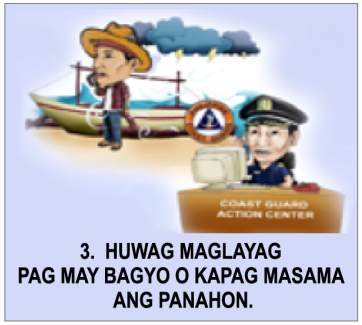


1. ALAMIN ANG LAGAY NG PANAHON BAGO PUMALAOT.

b) Listen to the radio or watch TV regarding weather reports.

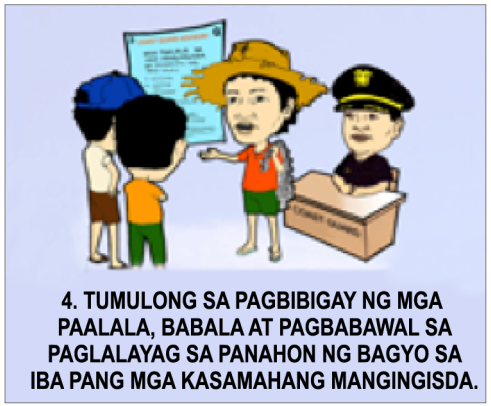
2. MAKINIG SA RADYO AT MANOOD NG TELEBISYON UKOL SA MGA ULAT PANAHON.

c) Do not sail when there is typhoon or when the weather is bad.



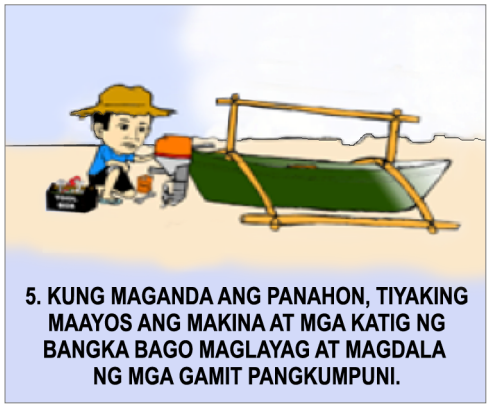
3. HUWAG MAGLAYAG PAG MAY BAGYO O KAPAG MASAMA ANG PANAHON.





4. TUMULONG SA PAGBIBIGAY NG MGA PAALALA, BABALA AT PAGBABAWAL SA PAGLALAYAG SA PANAHON NG BAGYO SA IBA PANG MGA KASAMAHANG MANGINGISDA.

d) Help in giving reminders and warning of sailing in bad weather to other fishermen.



5. KUNG MAGANDA ANG PANAHON, TIYAKING MAAYOS ANG MAKINA AT MGA KATIG NG BANGKA BAGO MAGLAYAG AT MAGDALA NG MGA GAMIT PANGKUMPUNI.

e) During good weather, ensure that the boat engine is in good condition before sailing and bring repair tools.

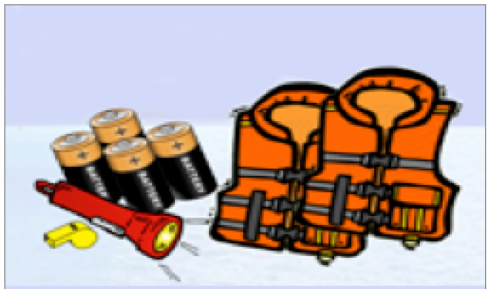
6. IPAGBIGAY ALAM SA INYONG BARANGAY KAPITAN AT LOKAL NA OPISYAL ANG GAGAWING PAGLALAYAG AT MAG-IWAN NG CONTACT NUMBER

f) Inform your Barangay Captain and LGU about intended sailing and give them contact numbers.

g) Know and remember Hotline numbers of Coast Guard, NDCC, AFP, PNP, Barangay & Coast Watch.

7. ALAMIN AT TANDAAN ANG MGA HOTLINE NUMBERS NG COAST GUARD, NDCC, AFP, PNP AT NG INYONG MGA BARANGAY AT BANTAY DAGAT.

h) Bring enough number of lifejackets, flashlight, batteries and whistle when sailing.



8. MAGDALA NG SAPAT NA BILANG NA LIFE JACKETS, FLASHLIGHTS, BATERYA AT PITO SA PAGLALAYAG.

i) Also bring fully-charged cell phone and transistor radio when sailing.

9. MAGDALA RIN NG FULLY CHARGED CELLPHONE AT TRANSISTOR RADIO SA PAGLALAYAG.



10. UGALIING MAGKAROON NG KASAMA O HUWAG LABIS NA LUMAYO SA IBA PANG MGA KASAMAHANG BANGKA.

j) Make it a habit to have a companion and do not get away from other boats.

11. HUWAG PUMALAOT SA MGA LUGAR NA WALANG SIGNAL HANGGAT MAAARI, IPAGBIGAY ALAM ANG INYONG KINAROROONAN.

k) As much as possible, do not sail out to areas where there is no cellphone signal. As much as possible, inform them of your whereabouts.

12. IPAGPATULOY NA ALAMIN ANG LAGAY NG PANAHON, LAGING ISAISIP ANG SARILING KALIGTASAN AT HUWAG MAKIPAG-SAPALARAN SA MASAMANG PANAHON.

l) Continue monitoring weather condition and always have in mind your own safety and do not take a risk against bad weather.

## 2. Principles of Survival at Sea

Emergencies, such as fire or collision, foundering, may occur on any vessel big or small vessels. The four basic principles of survival in an emergency at sea are:

- Knowledge about all types of emergency
- Being prepared for any emergency
- Know the actions to take during an emergency
- Know the main dangers to survivors

### a. Survival Awareness

Sea vessel passengers and fishermen are encouraged to raise their survival awareness every time they go out to sea. This will enable them to respond to any sea incidents that may arise and increase their chances of survival.

**Dangers to survivors:**

- Heat exposure
- Exposure to cold and hypothermia
- Effects of seasickness
- Failure to maintain body fluids correctly causing dehydration
- Drinking Seawater
- Sharks

- **Heat Exposure**

Heat exposure is caused by over-exertion, or over-exposure to heat or the sun. The most common types of heat exposure illness are heat stroke, heat exhaustion, and sunstroke. Heat stroke is the most serious and can lead to death.



Prevent heat exposure illnesses by drinking fresh water, staying in the shade, and resting. Also, keep the craft's canopy wet and wear wet clothing, since evaporation of the water is cooling.

- **Hypothermia**

Hypothermia occurs when your body loses more heat than it creates and your body temperature reaches 35 degrees Celsius or less. Most body heat is lost through the head and neck, but also through the armpit and groin.

To prevent hypothermia:
- Wear warm clothing (wool or synthetic clothing)
- Wear three or more layers of clothing
- Keep dry (stay out of the water)

First-Aid for hypothermia:
- Remove victim from the water
- Wrap victim in dry clothes, towels or blanket
- Give warm liquids

- **Seasickness**

Seasickness is caused by the rolling and pitching of the vessel or raft especially during foul weather. This will lead to vomiting, dizziness and eventually dehydration.

- Taking anti-seasickness tablets may help reduce seasickness.

- **Dehydration**

Failure to maintain body fluids correctly would cause dehydration. Also, dehydration is caused by excessive urination, vomiting and diarrhea. Symptoms of dehydration include increasing thirst, headache, sleepiness, and reduced or dark urine.

**To prevent dehydration:**

- Drink fresh water and never your urine or sea water
- Don't drink alcohol or sweet drinks
- Don't eat if water is not available
- Avoid unnecessary movements

- **Drinking Seawater**

Drinking of seawater is poisonous, do not drink it, otherwise you will feel more thirsty and more likely to die.

Seawater only uses your water reserves to neutralize the seawater's salt, causing rapid dehydration.

- **Sharks**

Do not attack sharks. Despite their reputation, shark rarely attack people. However, if they are in your area, avoid attracting them. Sharks are attracted to blood and body wastes, shiny objects, movement, and irregular noise, such as splashing and screaming. Limit your disposal of any type of waste, and throw it as far from the craft as possible. Also, stay out of the water, and do not suspend your arms and legs in the water.

**b. Survival in open water**

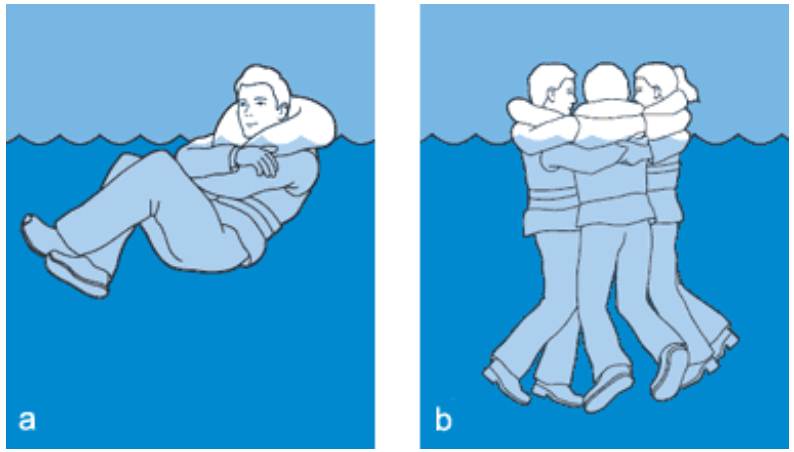
Water can be a lot colder than you can imagine. In the water, the body loses heat at least 25 times faster than it does in the air.

Always wear your lifejacket because you'll never know when you could end up in the water. If you do fall into the water, use the H.E.L.P (Heat Escape Lessening Posture) below to conserve body temperature (a & b).



a. Hold the arms tight against the chest, press the thighs together, and raise up the knees to protect the groin.

b. Groups of three or more should adopt the huddle position. The sides of the chests and the lower torsos are pressed together, arms hugging each other around the lifejackets. Intertwine legs as much as possible, and talk to one another. Children succumb to cold much more quickly than adults, and should be sandwiched in the middle of the group.




*http://www.coastguardlaketaupo.nz/safety/survival-in-cold-water/*

**c. Measures to enhance victim/s survival**

After the survival craft has been safely move away from the danger area and the sea anchor is holding the craft, rescuers should do the following measures to enhance survival.

- Immediately establish boat organization (the highest person in terms of position should take the command)
- Assign tasks such as lookouts, care of signals, radio operator, rationing and supplies, maintenance of the survival craft, and medical care

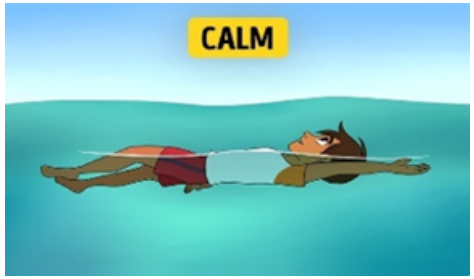
- Install protective covers, insulate the floor from cold, wet clothes be removed and dried, and have thermal protective aid be used
- Distribute blankets, anti-seasickness tablets and medical attention
- Rig detection devices
- Search for other survivors
- Gather other survival crafts

**3. Survival Tips:**

- STOP and Think
- Floating
- Finding water
- Control
- Beware of predators
- Getting Rescued

- S.T.O.P. = Stop, Think and Plan
  - Stay afloat.
  - Find shelter during the day.
  - Wait to see if rescuer arrives.
  - Travel at night in one direction until you reach civilization.
  - Find a source of food.

- Floating:
  - Calm Water Back Floating






  - Rough Water Front Floating

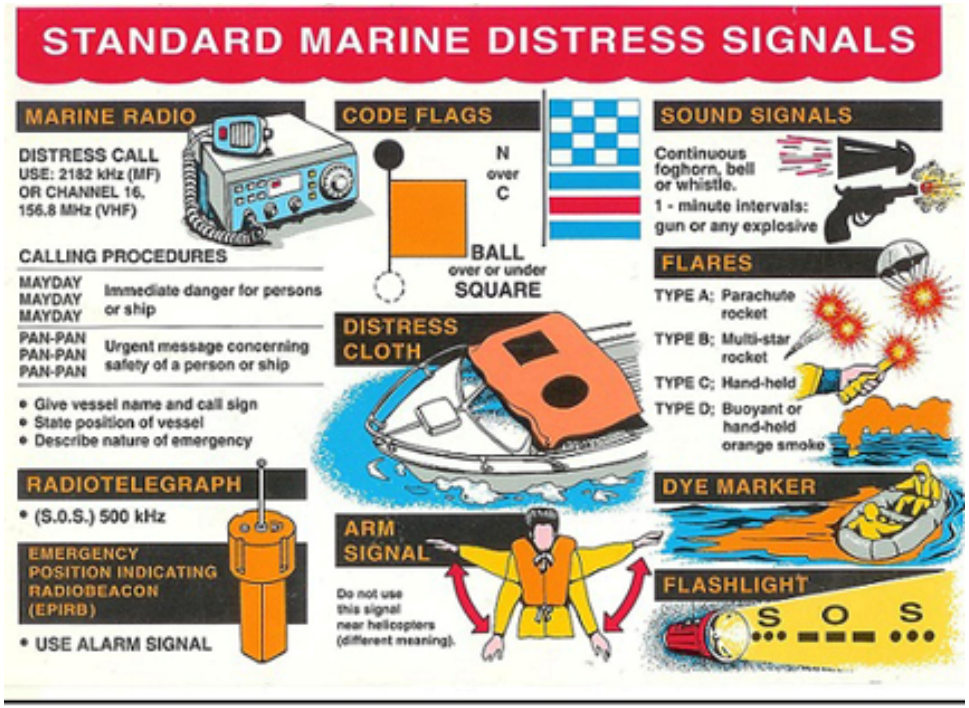

- Finding Sources of Drinking Water:
  - Rain water
  - Fish liquids
  - Drinking salt water or urine is not advisable

- Finding Sources of Food:
  - Fishing
  - Seaweed foraging

- Control:
  - Don't waste your energy to fight the current. Simply allow the current to take you where it must
  - Use sea anchor

- Getting Rescued or Conducting Search and Rescue

  o Use of Visual Distress Signaling Devices
    - Hand signal
    - Code Flags
    - Dye Marker
    - Orange Smoke signal
    - Pyrotechnic
    - Flashlight
    - Signaling mirror



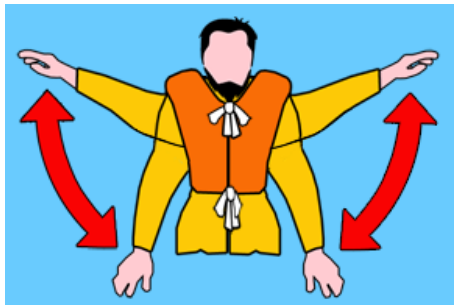

Infographic of 10 standard marine distress signals used in the maritime environment. Distress signals pictured include, visual, sound, day and night means of communicating distress. Infographic courtesy of the U.S. Coast Guard Auxiliary http://coastguardnews.com/coast-guard-stresses-boating-safety-distress-signal-awareness/2017/04/21/

***Figure 1***

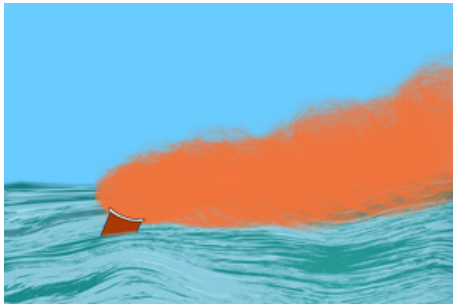
- **Day Use Visual Distress Signals**

**Hand Signal**

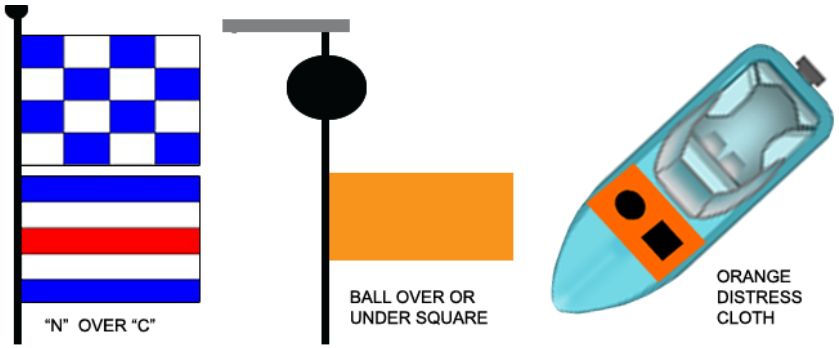
- Slowly wave your outstretched hands up and down to signal distress



- Orange Smoke (Handheld or Floating Device)



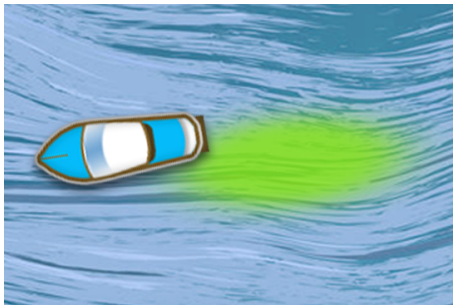
**Code Flags:**




- The International Signal for Distress: Code Flag 'N' (November) flown above Code Flag 'C' (Charlie);
- Ball over or under the square
- An orange distress cloth (or flag) with a black square and circle.

**Dye Marker**

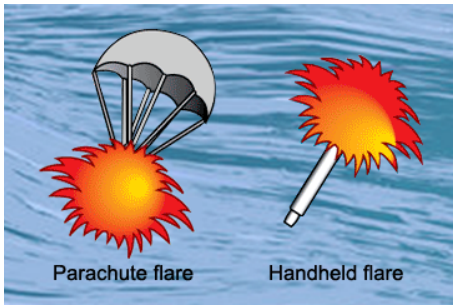
- Small containers containing yellow or green dye applied into the water as marker



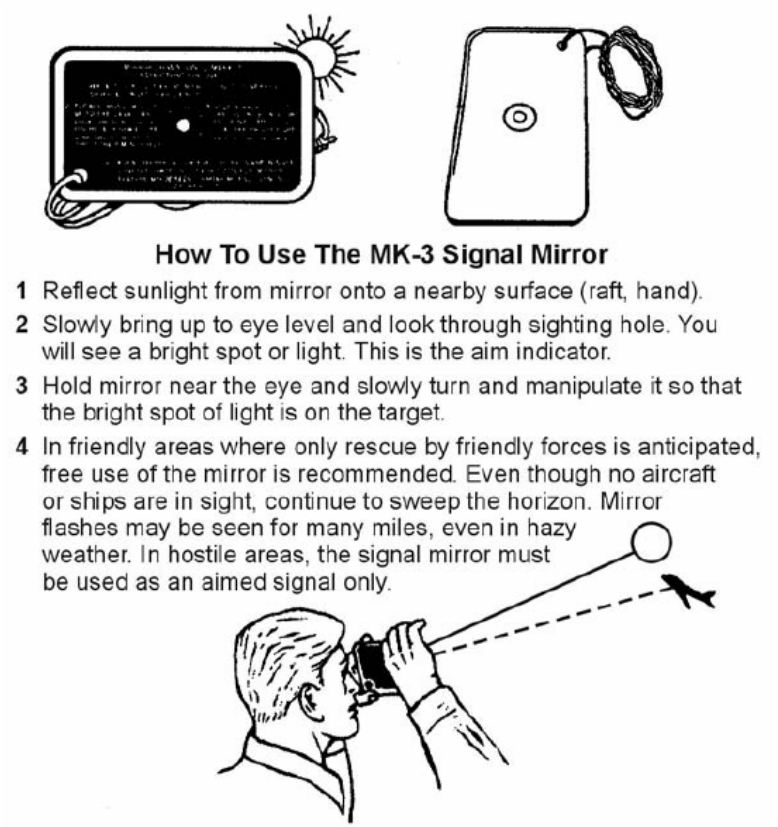
o **Day and Night Use Visual Distress Signals**

**Pyrotechnic**

- Parachute flare
- Red flare




o **Signaling Device**






**How to Use the MK-3 Signal Mirror:**

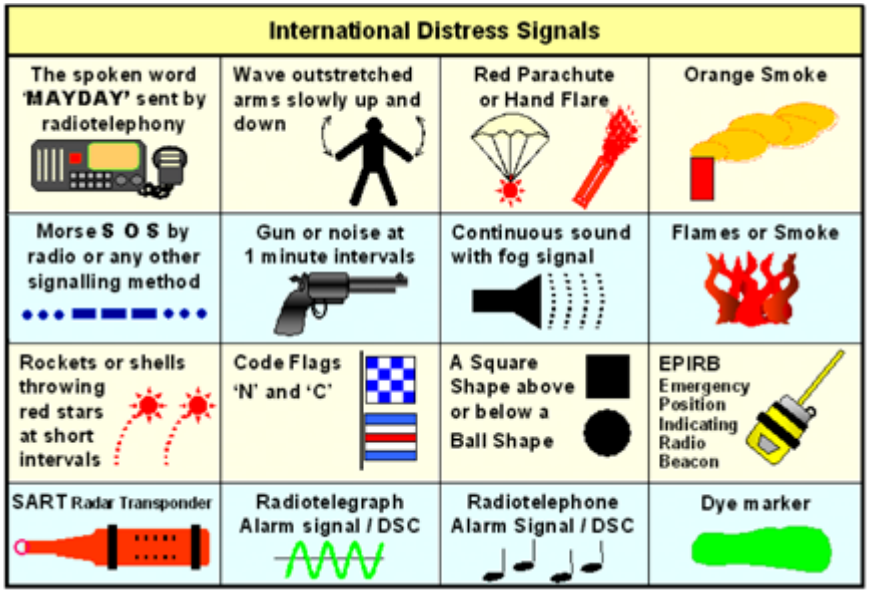

1. Reflect sunlight from mirror onto a nearby surface raft, hand).

2. Slowly bring up to the eye level and look through sighting hole. You will see a bright spot or light. This is the aim indicator.

3. Hold mirror near the eye and slowly turn and manipulate it so that the bright spot of light is on the target.

4. In friendly areas where only rescue by friendly forces is anticipated, free use of the mirror is recommended. Even though no aircraft or ships are in sight, continue to sweep the horizon. Mirror flashes may be seen for many miles, even in hazy weather. In hostile areas, the signal mirror must be used as an aimed signal only.

o **International Distress Signals**



## B. LIFE SAVING EQUIPMENT

### 1. Lifebuoys

Lifebuoys are life saving devices designed to be thrown to a person in the water to provide buoyancy and to prevent drowning. These flotation devices are usually ring or horseshoe-shaped and has a connecting line allowing the victim to be pulled to the rescuer in a boat.

Other types of life saving flotation devices are the rescue tube and the torpedo buoy (diamond buoy).

Ring lifebuoys are international orange in color and have retro-reflective markings at four evenly-spaced points around the body.


### 2. Survivor Strop

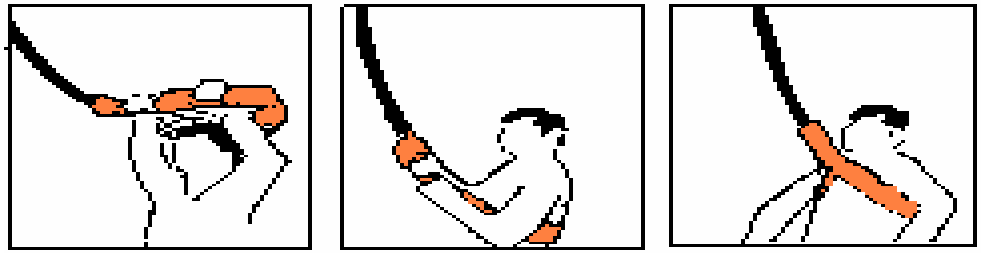
The survivor strop (also known as the "horse-collar") provides a secure and safe means of hoisting an uninjured person. It is designed to be placed under the arms and around the back.



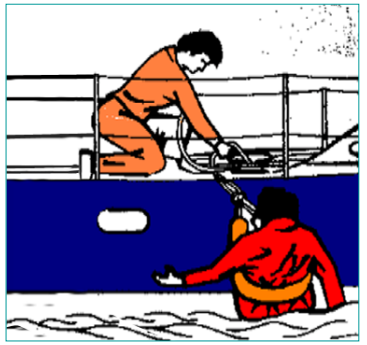
The strop has a locking piece which slides down the strap to secure the survivor. The webbing strap running through the cover has a D or V-ring at both ends for attachment to the rescue hook.

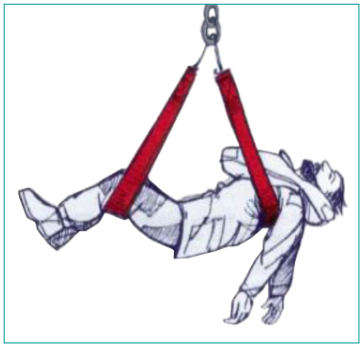
**a. How to put on the survivor strop:**

(1) Throw the survivor strop to the person in the water. The person in water should open strop and slip into head and under the arms; slide down the locking piece to tighten strop



(2) Pull survivor close to the side of the boat and slowly pull the person up unto the boat. If difficult, put another strop on the legs and hoist up unto the boat.





### 3. Life Jacket

Life jacket is a flotation device that is designed to keep a wearer afloat in the water. It also helps to retain body heat in case you fall into cold water.

Life jackets are usually colored bright orange to make the wearer easier to see and to find. It is also important to get a life jacket that fits you properly.

**How to put on a life jacket:**

(1) Place head through the opening.

(2) Pull both bottom tapes sideways to enable jacket to fit snugly under chin.

(3) Cross tapes at the back

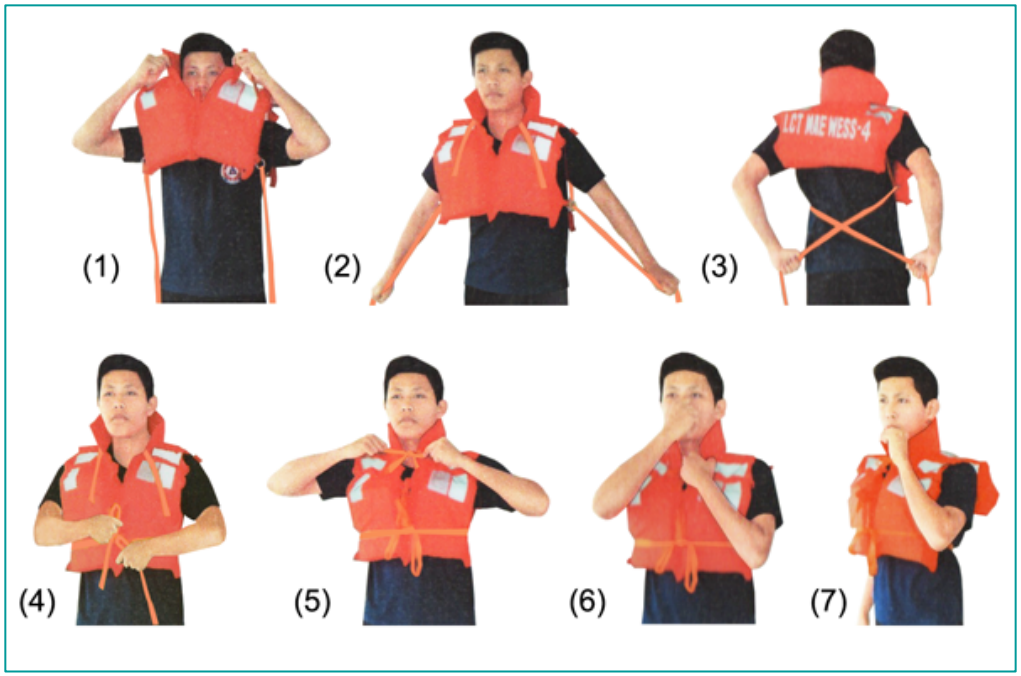
(4) Tie firmly at the front groove between middle and bottom sections.

(5) Tie firmly the tapes under the chin.

(6) When jumping, grasp the neck opening with one hand very firmly and pull down hard while the other hand pinch the nose as you enter water.

(7) When in water, blow the whistle in order to ask for help.

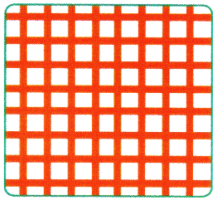




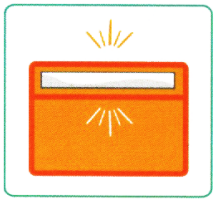

### 3.1 SALBABOTE

"Salbabote" is an improvised flotation device using plastic mesh bag with straps and empty 1.5 liter plastic beverage bottles. This life saving device can be used as a lifebuoy, a raft and anchoring device at times of emergency, i.e., floods,

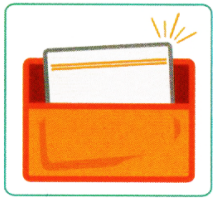
## A. Parts of a Salbabote



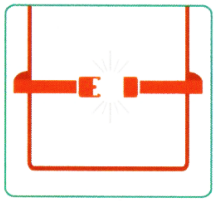
Bag made from plastic mesh



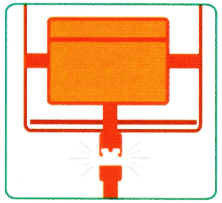
Front pocket with reflector



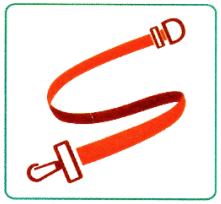
Resealable plastic bag inside the pocket



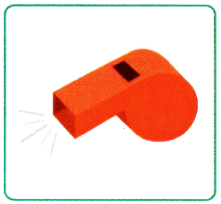
Strap for waist



Strap for in-between thighs

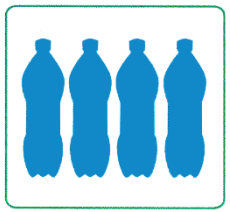


Multi-purpose strap with 2 set of clips



Whistle attached to the strap


Instruction Manual



Softdrink PET bottles: Child: three 1.5 liter bottle Adult: four 2-liter bottle

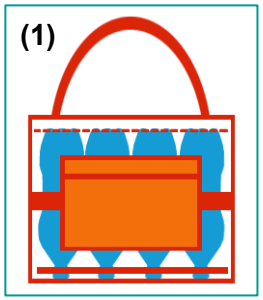
### b. How to assemble a Salbabote

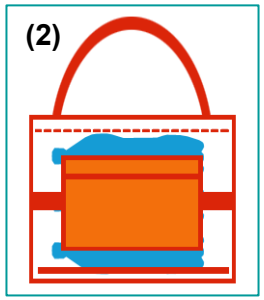
(1) For adults, put 4 empty 1.5 liter plastic beverage bottle inside the Salbabote mesh bag. Make sure the bottles are placed upside down with the bottom near the bag zipper/opening.

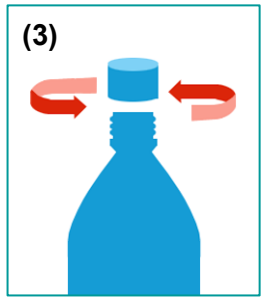
(2) For children, put 3 empty 1.5 liter plastic beverage bottle inside the Salbabote mesh bag. Make sure they are placed on their sides.



(3) Empty plastic beverage bottles should have no holes or dents. Check if the bottle covers are tightly sealed.



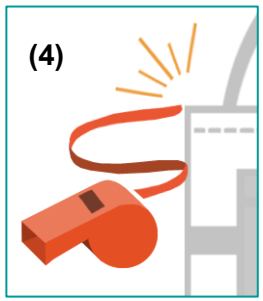



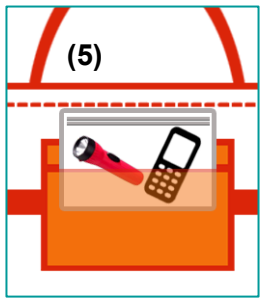



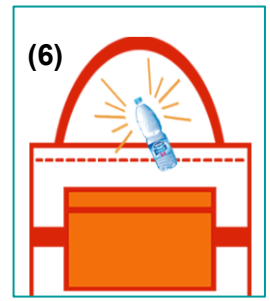

(4) Attach the strap with whistle at the upper right portion of the Salbabote bag strap.

(5) You can put important documents, cellphone, flashlight, batteries, etc. on the re-sealable plastic bag before placing inside the front pocket of the Salbabote bag.

(6) A small water bottle or a sealed snack can be placed inside the Salbabote bag.



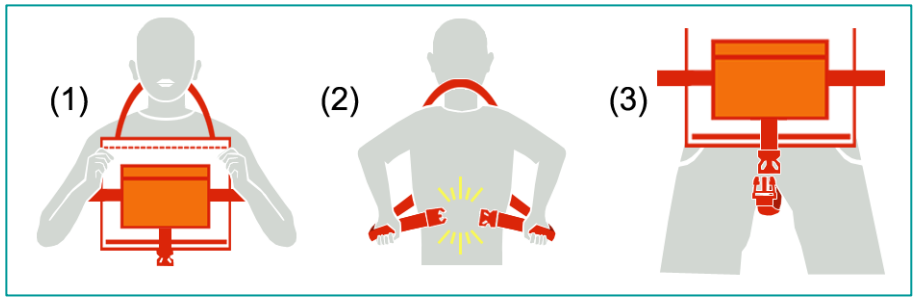




### c. How to put on a Salbabote

(1) Attach the straps behind the neck and adjust the Salbabote to the center of the chest.

(2) Clip the side straps at the back of the waist and adjust to fit.

(3) Clip the back middle bottom strap to the front between the thighs and adjust to fit.

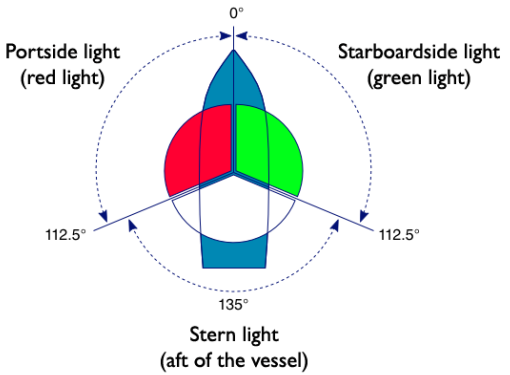



## C. RULES OF THE ROAD IN NAVIGATION

1. **Navigation Lights**
2. **Steering and Sailing Rules**
3. **Sound Signals in Restricted Visibility**

### 1. Navigation Lights (Day & Night)

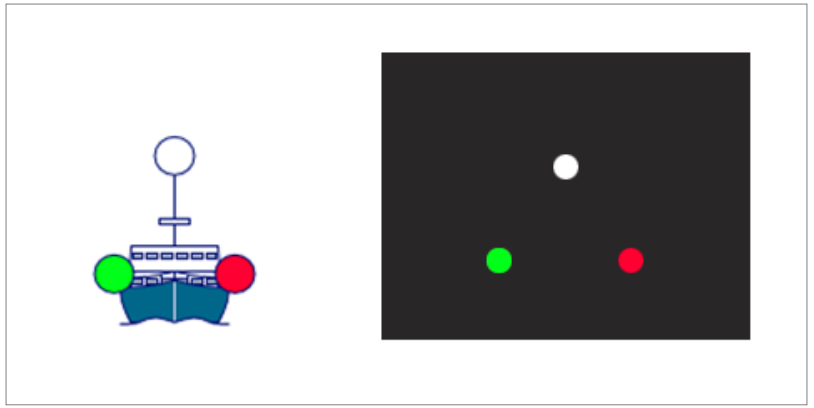
A navigation light is a colour source of illumination on a waterborne vessel to signal crafts position, heading and status.



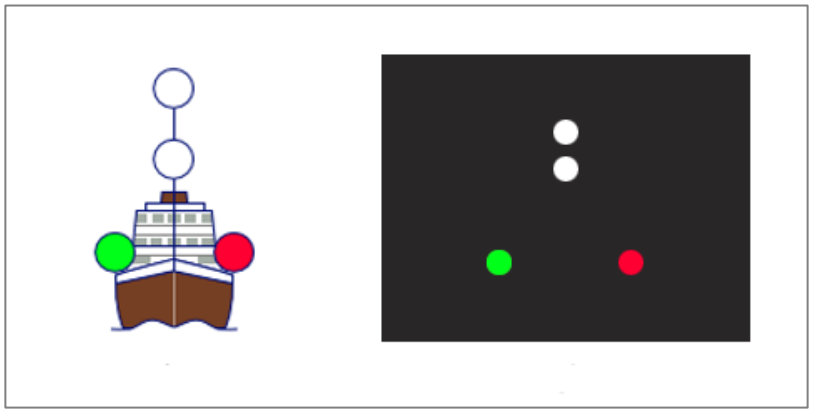



**a. Vessel is dead ahead**

- Vessel less than 50 meters



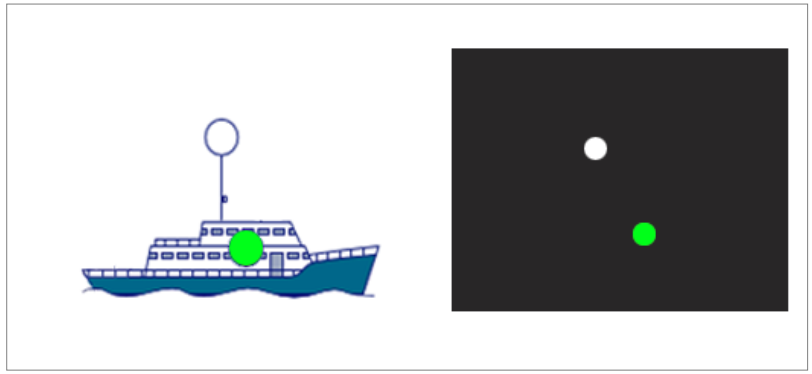
- Vessel more than 50 meters



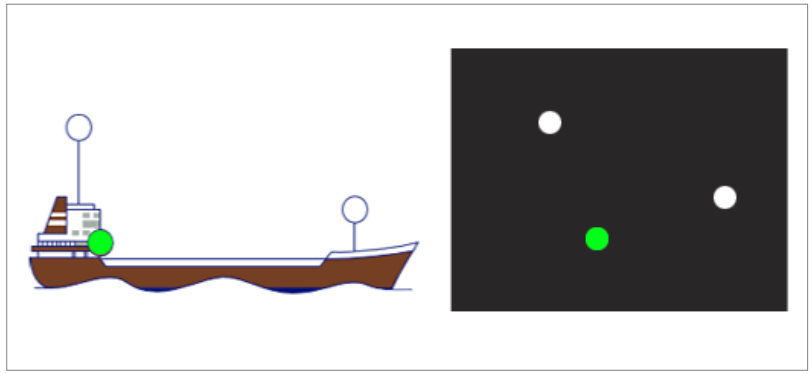
When a vessel shows two masthead lights, one forward and one Aft, Green Light on the Starboard side (Right) and Red on the Port side (Left), it means that a vessel is dead ahead.

**2. Vessel on starboard side (right)**

a. Vessel less than 50 meters



b. Vessel more than 50 meters

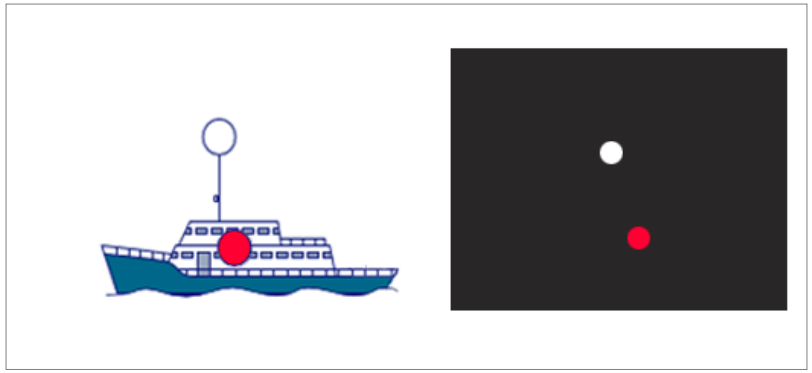


When a vessel shows two Masthead lights and a Green light, it means that a vessel shows its starboard side (right side).

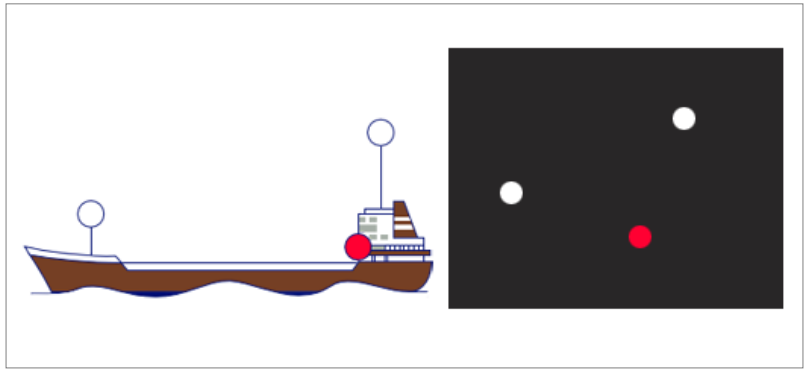


**c. Vessel on portside (left)**

- Vessel less than 50 meters

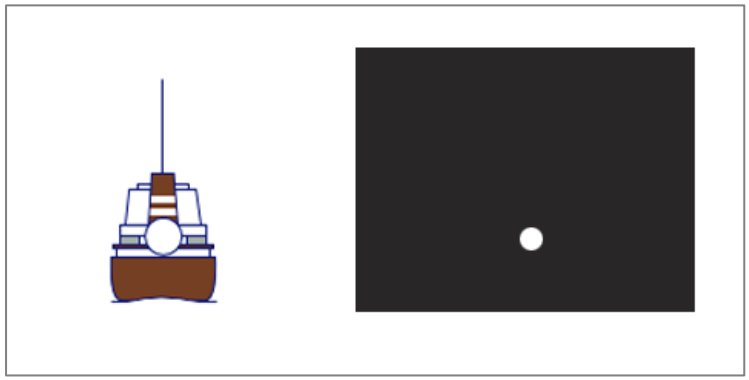


- Vessel more than 50 meters



When a vessel shows two Masthead lights and a Red light, do not cross ahead. That means a vessel is crossing. Relevant to Land traffic rule “Red is stop” or red means danger.

**4. Vessel astern or rear of the vessel**



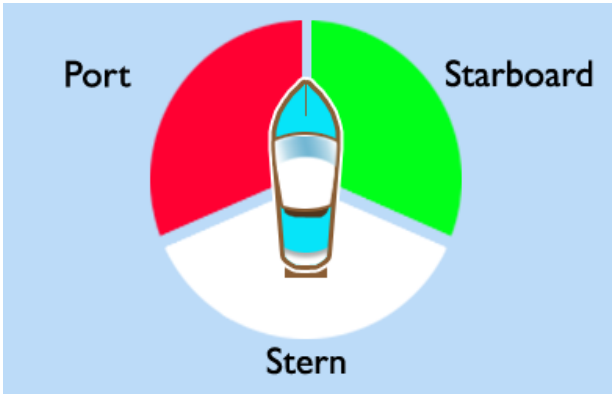
When a vessel is astern, it shows its stern light, sidelights and masthead lights are not visible.

**2. Steering and Sailing Rules**

Boaters call navigation rules “The Rules of the Road.” – the basic laws governing the steering or sailing of a boat. The Rules of the Road define the roles and responsibilities of vessel operators so that accidents like collision, could be avoided.

The Rules of the Road include actions to take when encountering another vessel on the water. Some of the most common situations you may encounter are: overtaking, meeting head-on, and crossing the bow of another vessel. In each case, the boat designated as the “give-way” vessel is required to yield to the other boat, while the boat designated as the “stand-on” vessel should maintain its course and speed.





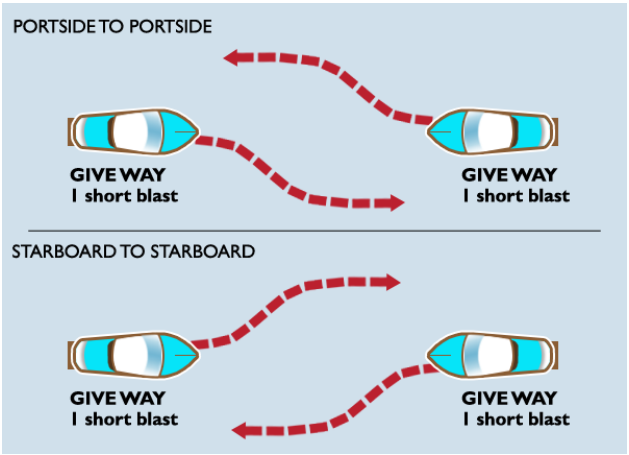

**PORT:** If a power-driven vessel approaches within this sector, maintain your course and speed with caution,

**STARBOARD:** If any vessel approaches this sector, keep out of its way (Note: This rule may not always apply if one or both vessels are sailboats).

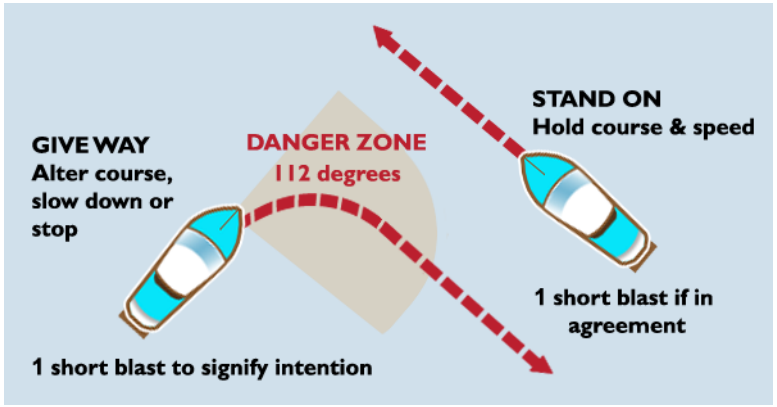
**STERN:** If any vessel approaches this sector, maintain your course with caution.

**a. Meeting Head-on situation**

- Vessels generally pass portside to portside. However, they may pass starboard to starboard if proper signals (blasts) are given.



**b. Crossing situations**




**c Sound Signals for Power Driven Vessel (Restricted Visibility)**

COLREG – Rule no. 3 ”Restricted Visibility means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other similar causes.

## III. BASIC LIFE SUPPORT

### A. What is Basic Life Support?

***Basic Life Support (BLS)*** is a level of medical care which is used for victims of life-threatening illnesses or injuries until they can be given full medical care at a hospital. It can be provided by trained medical personnel, including emergency medical technicians, paramedics, and by qualified bystanders.

BLS includes recognition of respiratory or cardiac arrest or both and how to apply proper application of CPR to maintain life until a victim recovers or advanced life support is available.

### B. Chain of Survival

The *Chain of Survival* refers to the different pathways of care for people who experience cardiac arrest:

1. Immediate recognition of cardiac arrest and activation of emergency response system
2. Early CPR with emphasis on chest compressions
3. Rapid defibrillation
4. Effective advanced life support
5. Integrated post-cardiac arrest care



**AHA ECC Adult Chain of Survival**

| Recognition of cardiac arrest & activation of EMS | Early CPR | Rapid defibrillation | Advanced life support | Integrated post-cardiac arrest care |
|---|---|---|---|---|

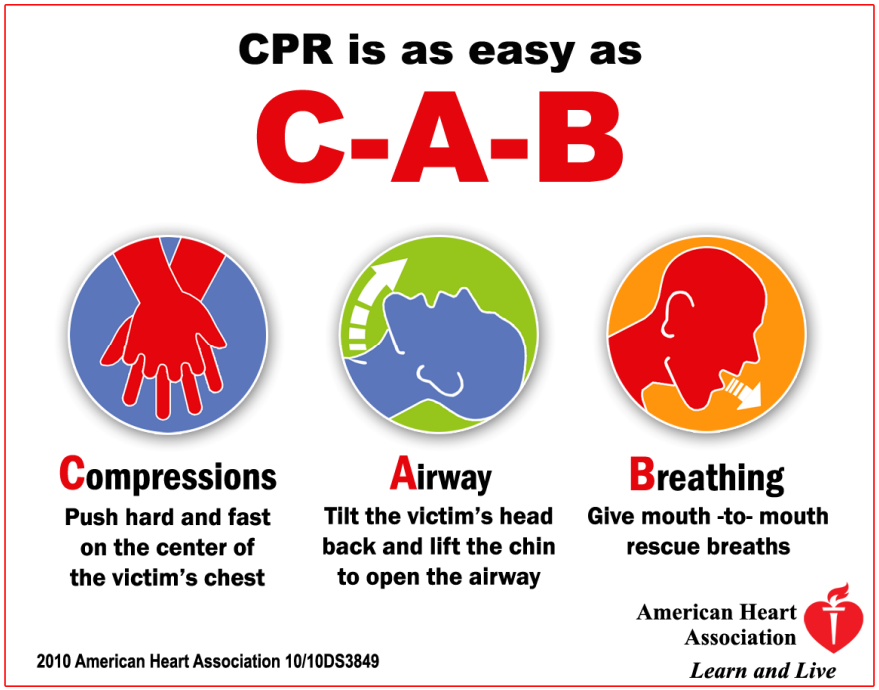
*Source: 2015 AHA Guidelines for CPR and ECC*

### C. Guidelines in Giving Emergency Care

1. Survey the scene. Be sure it is safe for both the victim and the rescuer
2. Give your emergency responder statement: “My name is _____. I’m an Emergency Responder, may I help you? If unresponsive, tap the shoulder or arm and ask, “Are you okay?”
3. Shout for help. Alert or activate emergency response service.
    - If alone, Call First (non breathing patient) then provide emergency care. Or, Care First – non breathing patient of a drowning or other respiratory-related problem
4. Check for a response. Assess and check the victim’s consciousness, circulation, airway and breathing.
5. If responsive, leave him in the position in which you find him provided there is no further danger; try to find out what is wrong with him and get help if needed; reassess him regularly.

6. If unresponsive, no breathing, no normal breathing (gasping), start CPR. Remember that the patient must be on his back and on a sturdy surface.

7. If unresponsive, no breathing but has pulse, start rescue breathing.




**D. Cardiopulmonary Resuscitation**

Cardiopulmonary Resuscitation (CPR) is a combination of chest compression and rescue breaths. This must be combined for effective resuscitation of the victim of cardiac arrest.

**Primary emphasis:**

- o If bystander not trained (adult arrest); Hands-only CPR
- o If bystander trained and able; perform compressions and ventilations at rate of 30:2



- **How to do chest compression**

(1) Locate the chest compression site. Run your index and middle fingers up the lower margin of the rib cage. Place the heel of one hand in the chest center between the nipples. Place your other hand on top of the hand already on the chest and interlock your fingers.

(2) Position yourself so that your shoulders are directly over your hands and your arms are straight – lock your elbows.

(3) Do chest compressions at a depth of at least 5-6 cm (2 in) in adults and at the rate of at least 100-120 compressions per minute (about the tempo of the Bee Gee's "Staying Alive".

(4) Lift hands slightly after each compression to allow the chest to recoil

- **How to deliver rescue breaths**

(1) After 30 compressions, open the patient's airway using the head tilt-chin lift method.

(2) Pinch nose and give two (2) slow breaths (2 sec.) with a brief pause in between.

(3) Continue with cycles of 30 chest compressions and 2 rescue breaths until they begin to recover or emergency help arrives.

- **When to Stop CPR:**

  (1) Medical services or properly trained and authorized personnel arrives

  (2) You can defibrillate with an AED (Automated External Defibrillator)

  (3) The patient revives

  (4) Another emergency responder takes over for you

  (5) You are too exhausted to continue

## E. Respiratory Arrest and Rescue Breathing

Respiratory arrest is the condition in which breathing stops or inadequate. This may occur for a variety of reasons and regardless of the cause, it is a life-threatening situation which requires immediate management.

When a patient goes into respiratory arrest, they are not getting oxygen to their vital organs and may suffer brain damage or cardiac arrest within minutes if not promptly treated.

Rescue Breathing is a technique of breathing air into a person's lungs to supply him or her with the oxygen needed to survive.



- **How to deliver rescue breathing:**

  (1) Open airway. Tilt the victim's head back and lift the chin.

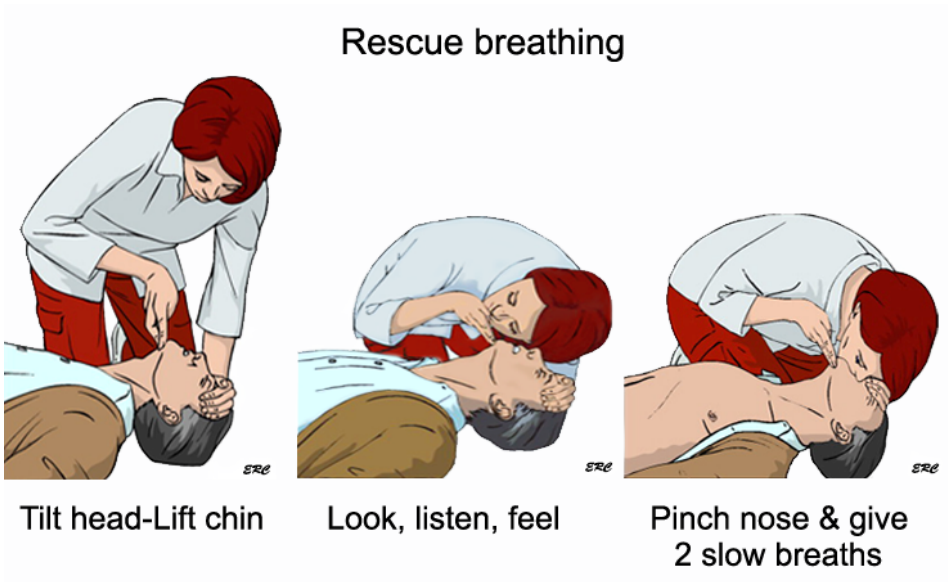
  (2) Check breathing (Look, Listen & Feel) for 5 seconds.

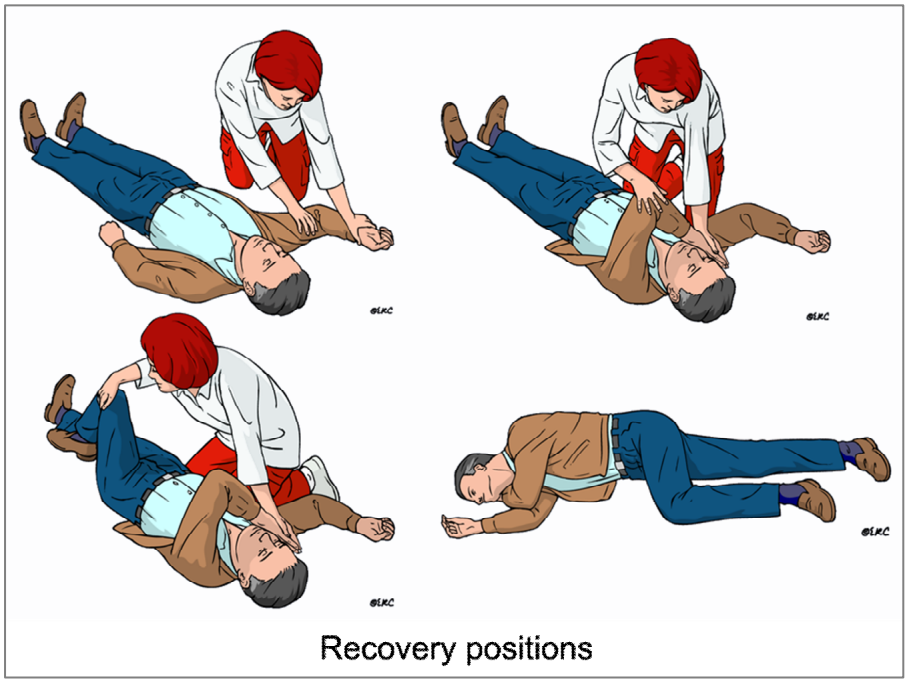
  (3) Pinch nose and give 2 slow initial breaths (2 seconds) with a brief pause in between. Watch for the chest to rise.

  (4) Maintaining head tilt and chin lift, take your mouth away from the victim and watch for the chest to fall as air comes out.

  (5) Continue rescue breathing. 1 breath every 5-6 sec. (10-12 breaths per minute).

  (6) Check for signs of circulation (carotid artery) for at least 10 seconds every 2 minutes.






*http://resuscitation-guidelines.articleinmotion.com/article/S0300-9572(10)00435-1/aim/adult-bls-sequence*



## REFERENCES

Koster, Rudolph W. ,et. al. 2010. European Resuscitation Council Guidelines for Resuscitation 2010 Section 2. Adult basic life support and use of automated external defibrillators (Published online 19 October 2010) pages 1277 - 1292 http://resuscitation-guidelines.articleinmotion.com/article/S0300-9572(10)00435-1/aim/adult-bls-sequence (Date accessed: December 14, 2016)

American Heart Association. 2015. HIGHLIGHTS of the 2015 American Heart Association Guidelines Update for CPR and ECC http://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guidelines-Highlights-English.pdf (Date accessed: November 30, 2016)

Commercial Fishing Vessel Industry Safety Advisory Committee in cooperation with the U.S. Coast Guard, et. al. QUICK REFERENCE Abbreviated Guide To Navigation Rules Of the Road https://www.uscg.mil/hq/cgcvc/cvc3/references/Rules_of_Road_Quick_Reference.pdf (Date accessed: December 12, 2016)

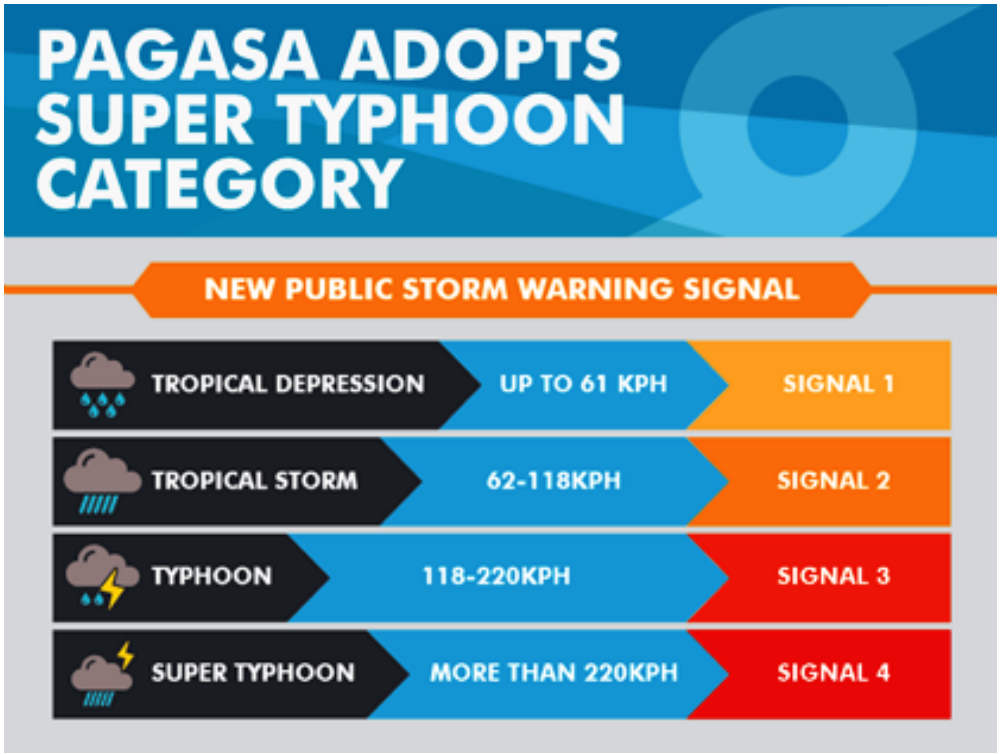
RYA Org-UK. 2016. Basic powerboat handling. http://www.rya.org.uk/knowledge-advice/cruising-tips/boat-handling-power/Pages/basic-powerboat-handling.aspx. (Date accessed: December 14, 2016)

http://www.boatsafe.com/nauticalknowhow/docking.htm (Date accessed: December 14, 2016)

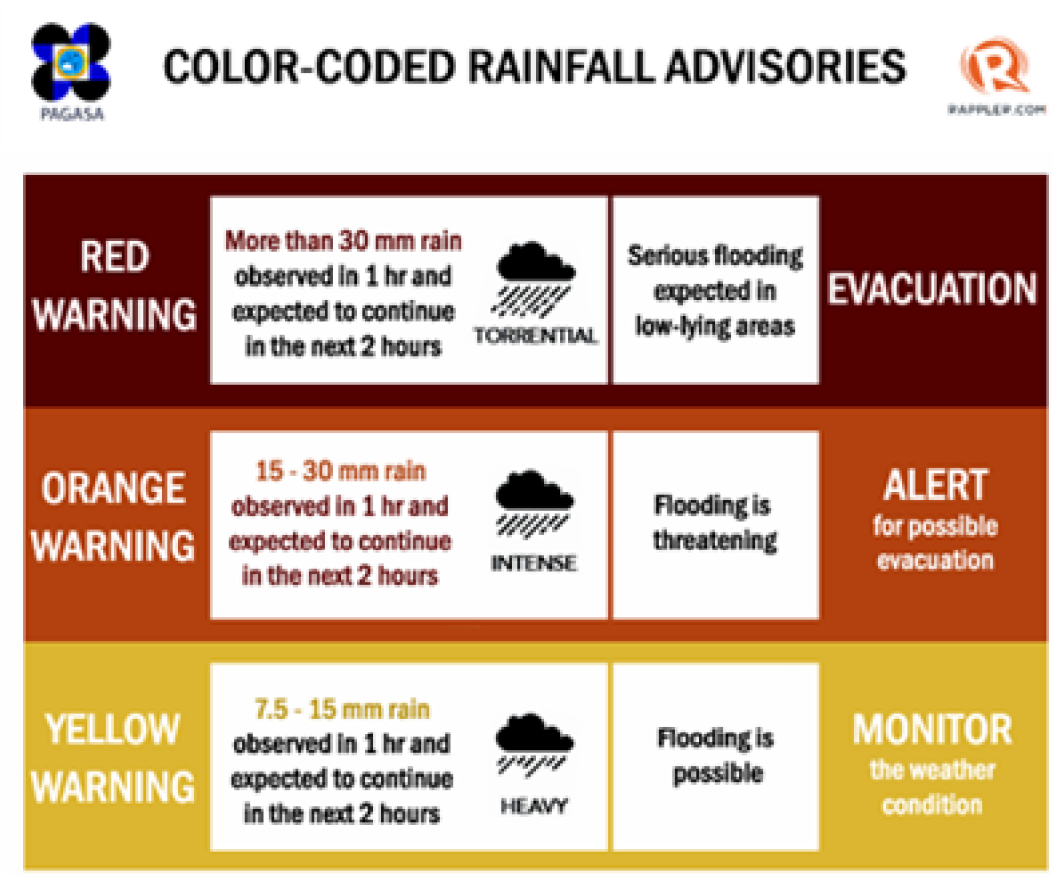
## ANNEXES



### ANNEX A. PAGASA's New Public Storm Warning Signal



**ANNEX B. PAGASA's Color-Coded Rainfall Advisories**

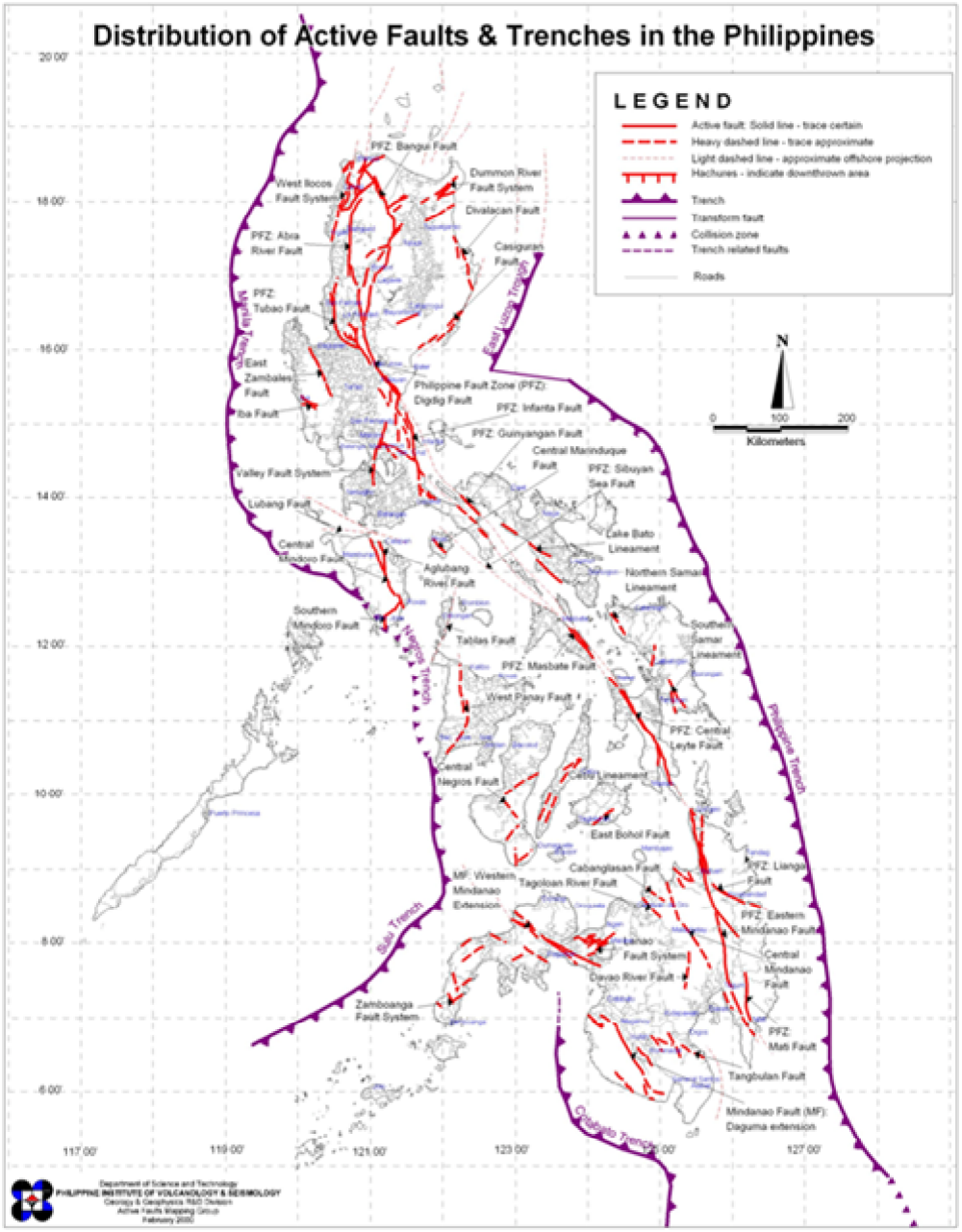



**ANNEX C. Thunderstorm Warning System**

**THUNDERSTORM WARNING SYSTEM**

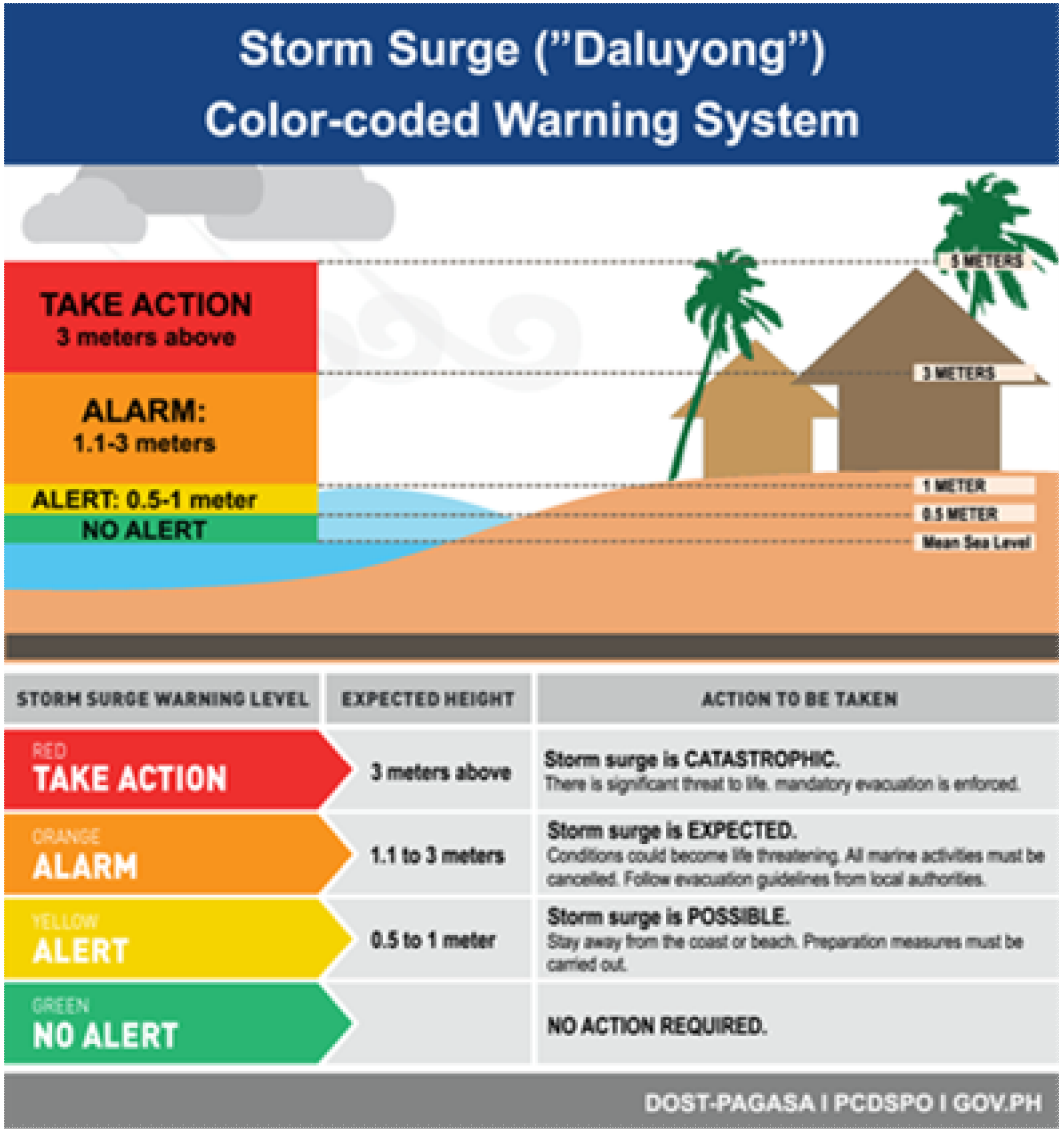
| WARNING | MEANING | DISSEMINATION |
|---|---|---|
| Information | Thunderstorm is *less likely to develop* in the Metro Manila area | This will disseminated thru SMS, Twitter and website |
| Watch | Thunderstorm formation is *likely within the next twelve (12) hours.*<br>This is more general than a warning. | This will be disseminated thru SMS, Twitter, website and fax |
| Warning | Thunderstorm is *threatening a specific area(s) within the next 2 hours.*<br>Updates will be issued as frequent as necessary | This will be disseminated thru SMS, Twitter, website and fax |

## ANNEX D. Distribution of Active Faults and Trenches in the Philippines






## ANNEX E. Storm Surge Color-coded Warning System



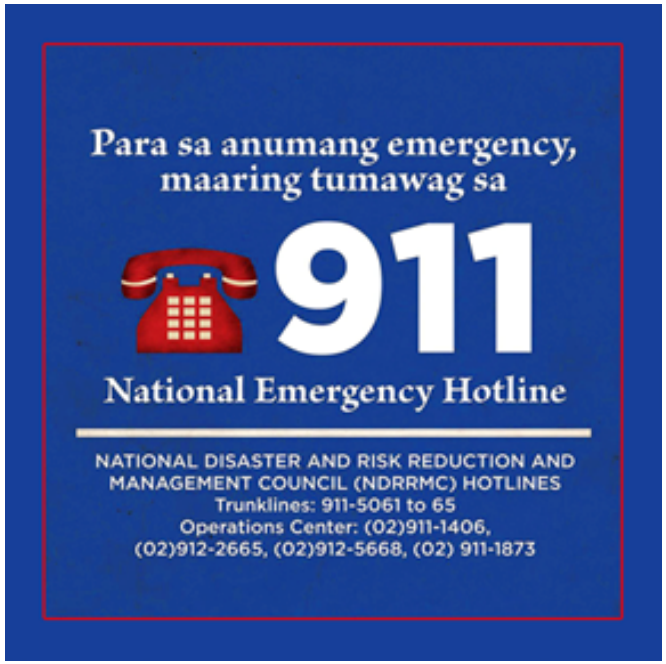

*http://www.panahon.tv/blog/2014/08/top-5-things-you-need-to-know-about-storm-surges/*

**ANNEX F. Preventive Measures and Safety Tips Before, During and After a Storm Surge**




**ANNEX G. Emergency Hotlines**

## ANNEX H. Local Emergency Hotlines




### LOCAL EMERGENCY HOTLINES

Local DRRMC: _____

Barangay DRRMC: _____

PCG District: _____

PCG Station: _____

PCG Sub-Station: _____

PNP City/Municipality: _____

PNP Maritime Group: _____

PN Naval Station: _____

Local DSWD Office: _____



### UNDER THE LEADERSHIP OF:

**VADM VALENTIN B PRIETO JR PCGA**
National Director

### ACKNOWLEDGEMENTS:

**COMMO ALEXANDER G ABILO**
MARSAF Support Group Director (2018)

**COMMO MANUEL F ORTIZ PCGA**
MARSAF Support Group Director (2017)

**CAPT EMIL OSEÑA**
MARSAF Deputy Director (2017-2018)

**COMMO LINO P W PADERANGA PCGA**
MARSAF Support Group Director (2014 – 2016)