



BOATING SAFETY GUIDE



The Government of Dubai seeks the development of the maritime sector and to ensure maximum maritime safety to maintain the integrity of life, facilities and the environment; to this end, this guideline has been developed by Dubai Maritime Authority. We recommend all operators of marine crafts to refer to this guide and keep it handy at all the marine craft at all times.

The marine craft is affected during its cruise by a number of natural factors such as wind direction, water depth and vision, therefore the marine craft operator must render effective monitoring by means of good vision and listening during the course of sailing, and he/she must also be familiar with the conditions of sailing, particularly in adverse climatic conditions, limited visibility and darkness, as it was found that most collisions between the marine craft result from negligence. The marine craft operator is responsible for taking all appropriate measures to ensure navigation safety.

Your cooperation to abide by these preventive guidelines and follow best practice procedures at sea will help you and those around to have a safe and enjoyable experience.

Boating Safety Guide

Welcome

1

Preparing for a trip

3

Presailing

General checklist

Safety equipments checklist

Supplies, clothing and documents

Preparing your marine craft

Departure

Safe speed

Safety while cruising

Returning to the marina

Safe Navigation

5

Manoeuvring between marine crafts

Power driven marine crafts

Head on Situation

Crossing

Overtaking

Sailing marine crafts

Sailing and power driven marine craft

Navigation in Narrow channels

Joined action to avoid collision

Anchoring

Navigational lights

Power driven marine crafts

Sailing marine craft

Marine crafts day shapes

Buoys and navigation signs

Buoys shapes and types

Emergencies

17

Types of emergencies

Grounding

Man overboard

Sinking marine craft

Collision

Fire

Visual & sound Distress signals

Safety equipment

19

Life jackets

Life Buoys

Fire extinguisher equipment

Distress signals (flares)

Marine environment

22

Maritime Knots

23

Dubai Marine Map

25

Before you begin any trip on the water, make the following checks to ensure the safety of your marine craft, crew, passengers and the environment.

You should insure that:

- your marine craft is well serviced, all machinery and life saving equipment are operational, the batteries are operational and charged.
- make sure that the fuel is enough for the whole trip (getting to your destination and all the way back) in addition to an extra amount for emergencies.
- to read the metrological report and make sure that the weather is suitable for sailing.
- to report your trip to the relevant authorities and gain a sailing permit.
- insure that all crew are licensed and that they have their license on board ready to present it to the authorities.
- Test and operate the navigation equipment, like Radar, VHF, ect...

1.Presailing

General checklist

- Ensure navigation lights are operational
- Look for cracks or wear and tear in the hull
- Make sure the engine cooling system is fully functioning
- Make sure that the fuel is enough for the whole trip
- Make sure life jackets are well maintained especially if life jackets are inflatable.
- Make Sure all Safety equipment's have been stored correctly and not been exposed to Sun light or sea water(May cause rusting or other damages).
- Inspect the fuel system for cracks or leakage
- Check the level of distilled water in the battery
- Check the battery is properly installed and power cables are well secured and clean
- Check the level of engine oil
- Make sure that the oil filter is clean
- Ensure ropes are in good condition and ready for use
- Check the steering system
- Make sure that there is a toolbox for maintenance on board
- Make sure that there is a First Aid box on board
- Engine is service and operational
- Inspect electrical wiring
- Avoid sailing with old fuel.
- Prior to sailing the safety Instructions to be given to the passengers.
- Safety Plan to be visible and accessible to all the passengers on each deck with clear information.
- Emergency Numbers to be visible and Muster list numbers to be explained to all the passengers prior to sailing.

- Fire & Smoke alarms to be tested on regular basis.
- Bilge Pumps & automatic Bilge alarms to be tested prior to sailing.
- For Inboard Engine's automatic fire extinguishers should be available or other alternatives should be provided such as fire port. For Example, the initial combustion gets oxygen while opening the hatch to extinguish that results in the fire to spread rapidly.
- After full capacity of passengers that occupy the stability is to be checked for a few minutes on the jetty prior to sailing.

Safety equipment checklist:

- Are life jackets in good condition and are there enough for everybody?
- Are life buoys in good condition and in their correct locations?
- Are fire extinguishers in good condition, ready to use and easily accessible?
- Check the meter on fire extinguishers
- Are distress signals in good condition, are they ready to use and are they easily accessible?
- Do communication equipment operate properly?
- All equipment on board are serviced according to manufacturer.
- Are the anchor, knife, mobile and hand torch available on board
- Are the battery charging cable and trash bags on board.

Supplies, clothing and documents

- Take clothing to protect you from different weather conditions and don't limit your movement.
- Be careful not to expose yourself to the sun, wind or rain for long periods
- Check the amount of water and food on board is enough for the journey and that there is an emergency supply
- Do not overload the marine craft - take into account baggage and heavy equipment
- Ensure all certificates and documents of the marine craft and the crew are up-to-date and in order

2.Sailing Procedures

Departure

- Notify the relevant authorities to acquire sailing permit
- Make sure you have sufficient information on the area you want to go to, how to reach it and the duration of the trip
- Investigate the condition of the sea and the weather
- Ensure orderly boarding of the passengers from the pier to the marine craft
- Make sure that all the passengers are sitting in their allocated places

- Make sure that no ropes are entangled with the propeller
- Make sure that all children under 10 are wearing their life jacket
- Check the number of passengers and do not exceed the official number specified for the marine craft
- Inform those who are on board of the type of safety equipment on the marine craft, its location and how to use it
- Comply with the speed restrictions during departure
- Make sure there is no other marine craft close by during the manoeuvring process
- The horn must be blown to alert other marine craft

Safe speed

Excessive speed and alcohol are the two main causes of accidents involving recreational marine crafts. Official authorities have the powers to use speed detection equipment to detect marine crafts exceeding the speed limit.

We advice always with the following:

- Driving with caution and attention and not exceed the speed limit
- Put the kill switch lanyard in the operator wrist, if the marine craft provided with this system.

The marine craft should at all times maintain safe speed, which is determined by operational and safety factors, speed is measured by knots and according to the following:

1. A speed limit of 5 knots is to be complied with in the ports of Dubai.
2. A speed limit of 7 knots is to be complied with in Khor Dubai and Mamzar.
3. A speed limit of 7 knots is to be complied with when passing through any waterway of which width is not more than 600m; a waterway separates between two islands, or an island and the coast of the Emirate.
4. **A speed limit of 7 knots is to be complied with in the following cases:**
 - (a) When compelled to enter within 300m of the beach area in the case of an emergency.
 - (b) When passing within 50m of any boat moorage, diving

Speed conversion chart

Knots	Mile/hour	Km/hour
1	1.15	1.85
5	5.57	9.26
10	11.51	18.52
20	23.02	37.04
30	34.52	55.56

platform, loading dock or ship moorage.

- (c) When passing through an anchoring area of small marine crafts.

Mentioned speed are implemented on all areas except for special areas with speed limits marked otherwise.

Safety while cruising

- Avoid crossing in front of any marine craft that has traffic priority
- Use a series of short horn blasts to alert other marine crafts and avoid collision
- In cases of restricted visibility , reduce your speed to the minimum and proceed with caution and alertness
- Do not obstruct the passage of another marine craft
- Do not navigate close to large ships during manoeuvring, or in narrow channel or high traffic zone
- It is your responsibility to maintain an effective lookout at all times and in all directions.
- The power driven marine crafts shall avoid passageway of large ships, or ships restricted by their draft and ability for manoeuvring.
- In case of witnessing a thunder storm, watch its direction carefully, for it is known to change their direction often, and it might cause strong wind , so it is advice to get back to shore directly.
- Be aware of low dark clouds, it might be an indication of a storm.
- Be flexible and change your plans when necessary
- Do not moor the boat to any floating object in the sea and then leave it, as it will cause danger to the safety and lives of other sailors and their property
- Do not use navigational buoys to moor the boat, this could damage them and impede navigation and risk the safety and lives of other sailors or damage their property

3.Returning to the marina

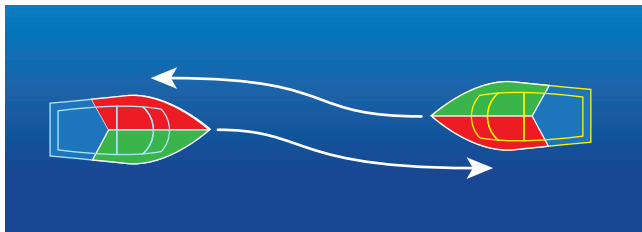
- Reduce your speed when approaching the port
- Do not overtake any marine craft inside the port.
- Maintain attention, cautiousness and a look out in all directions.
- Do not approach the manoeuvring areas of other marine crafts
- Ensure that you do not attempt to moor at the pier during the departure of another marine craft
- Passengers are disembarked only after the marine craft has completely moored.
- Aware of the status of the tides and water current due to their effect on the manoeuvring inside the channels and ports.

Manoeuvring between marine crafts:

Power driven marine crafts

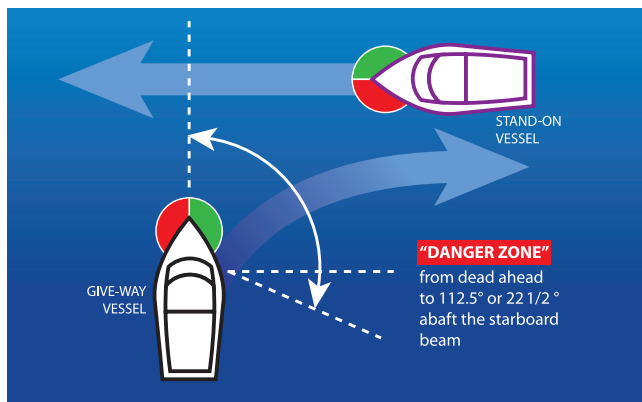
Head - on situation

When two power-driven marine crafts are meeting on a reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other (at night the side lights green and red can be seen).



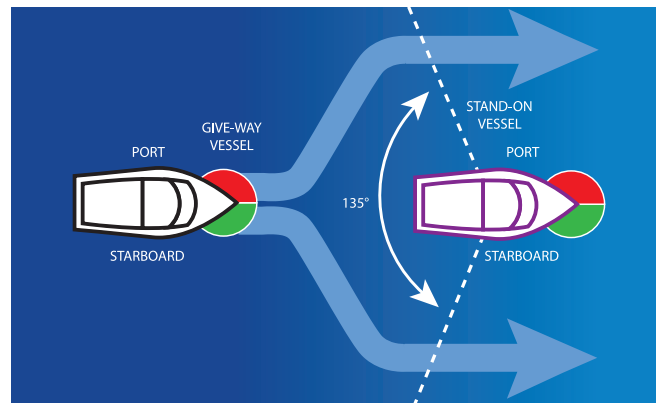
Crossing

When two power-driven marine craft are crossing so as to involve risk of collision, the marine craft which has the other on her own starboard side shall keep out of the way and shall, turn to starboard to allow the marine craft to pass on his port side (at night the side red light can be seen on his starboard).



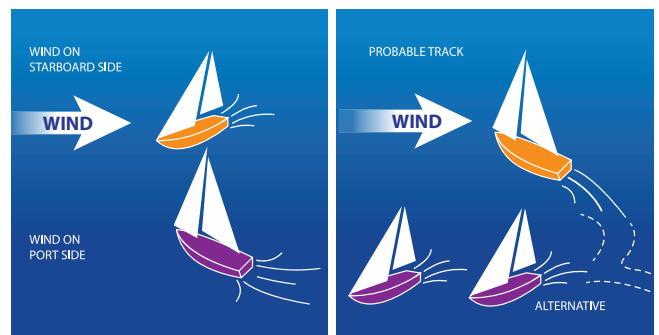
Overtaking

Any marine craft overtaking any other shall keep out of the way of the marine craft being overtaken, and keep a safe distance until the other marine craft can be seen clearly on her astern.



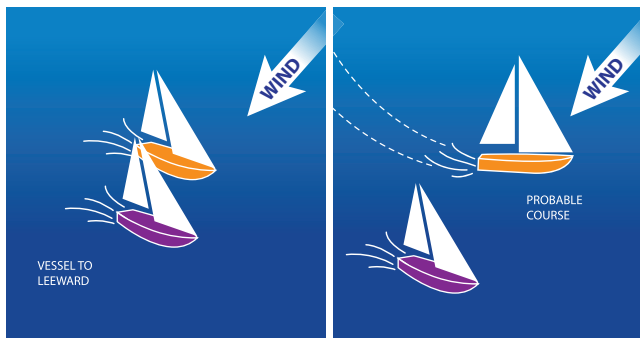
Sailing marine crafts approaching each other

When two sailing marine crafts are approaching one another, so as to involve a risk of collision, one of them shall keep out of the way of the other as follows: when each has the wind on a different side, the marine craft which has the wind on the port side shall keep out of the way of the other.



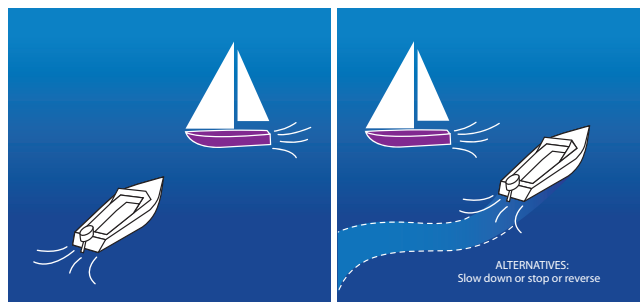
When both have the wind on the same side, the marine craft which is to windward shall keep out of the way of the marine craft which is to leeward.

If a marine craft with the wind on the port side sees a marine craft to windward and cannot determine with certainty whether the other marine craft has the wind on the port or on the starboard side, she shall keep out of the way of the other.



Sailing and power driven marine crafts

Motor marine crafts shall always give way to sailing and rowing marine crafts as is safe and practicable.

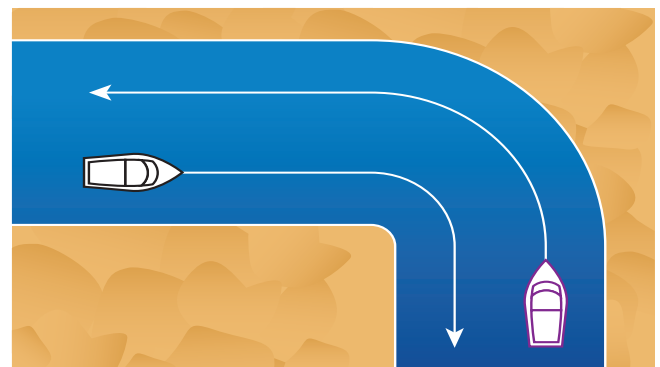


Navigation in narrow channels

- A marine craft proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.
- All marine crafts must not impede the passage of any other marine craft in the channel or narrow waterway.
- Do not cross the channel or narrow waterway horizontally if such crossing could impede the passage of another marine craft.
- All marine crafts should maintain safe speed at all times in order to give enough time for the marine craft to effectively stop within a safe distance with consideration of:
 - The area traffic
 - State of visibility
 - Marine craft ability to manoeuvre.
 - Sea state, current, wind, and proximity of navigational hazards.

Important Guidance

- When manoeuvring between marine crafts, the operator that he does not sure of manoeuvre to be far a way and keep safe distance.
- If you intend to overtake or approach a marine craft towing people practicing water skiing, stay away at least 50 meters from the skaters and the marine craft together.



• Joint actions to avoid collision

- The marine craft that gives way must take early measures to avoid accidents; change your speed or your direction so that it is apparent to other marine crafts, avoid crossing in front of a marine craft that has traffic priority; if necessary, stop or go back.
- You can sound a series of short whistles or horn sounds (five or more horns) to indicate that no sufficient action has been taken to avoid collision.
- The marine craft that has traffic priority (stand by marine craft) must maintain the same speed and direction, but the operator of the marine craft must avoid the other marine craft only if he finds that the measures taken by other marine craft are not sufficient; and, if necessary, he must act to take any action necessary to move away and avoid a collision.

Responsibilities of cruising marine crafts

Power driven marine crafts underway must keep out of the way of:

- Marine crafts not under command
- Marine crafts restricted in her ability to manoeuvre

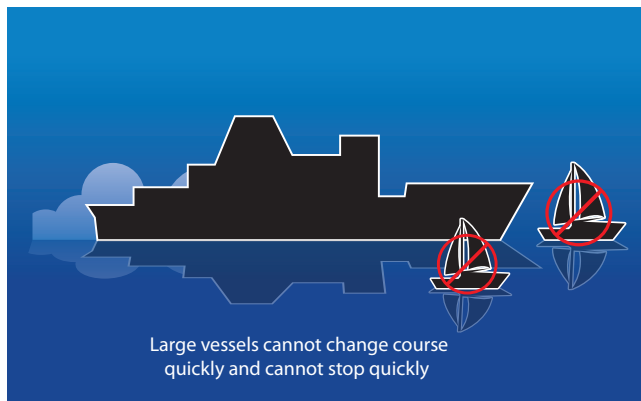
- Fishing marine crafts using fishing gear, such as nets, which limit their ability to manoeuvre
- Sailing marine craft

Sailing marine crafts underway must keep out of the way of:

- Marine crafts not under command
- Marine crafts restricted in her ability to manoeuvre
- Fishing marine crafts using fishing gear, such as nets, which limit their ability to manoeuvre

Small marine crafts operator must be aware about the following:

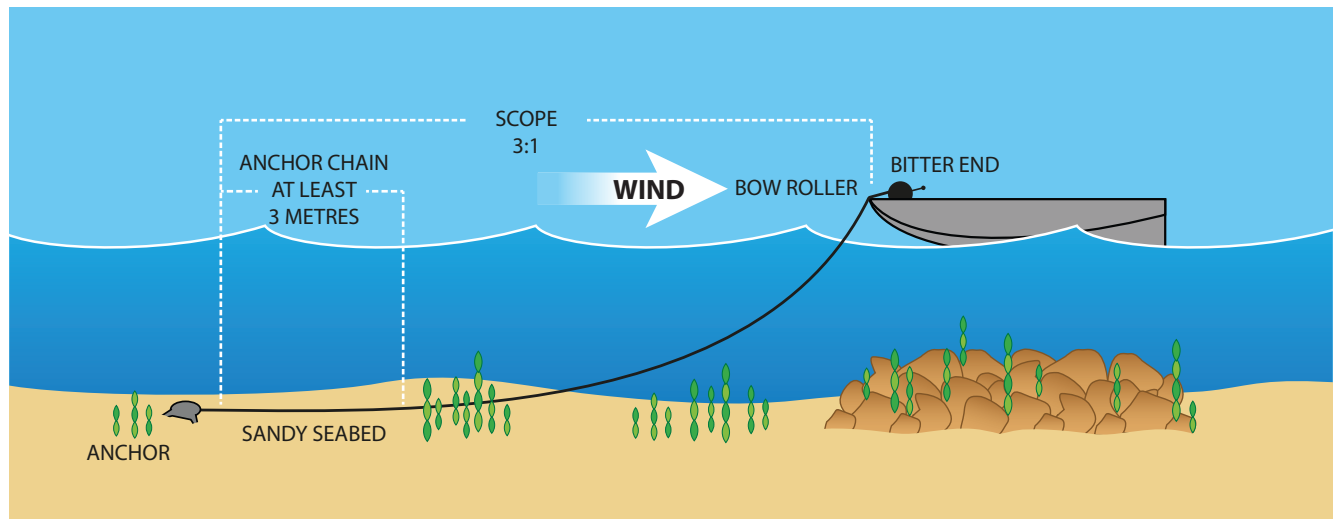
- Large marine crafts are not able to alter their course or stop suddenly.
- Small marine crafts might not be visible to larger marine crafts.
- Large marine craft may not be able to alter their course in narrow channels due to their draft restrictions, therefore the small marine crafts must be ready to alter their courses away from the large marine crafts.

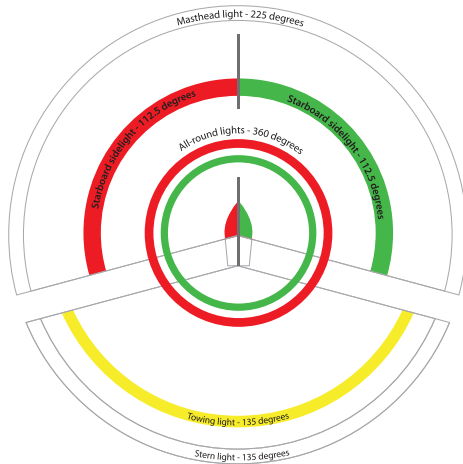


Anchoring

A proper anchoring process is essential for maintaining the safety of your marine craft. To achieve the highest level of anchor security, follow these steps:

- Anchor, chain and/or rope are to be selected in proportion with the requirements of marine craft and with the depth of the water it cruising in.
- The anchor must be dropped into the water slowly and not thrown from the deck.
- The chain must be lowered at a length equal to a minimum of three times the depth of the water, to be increased to five times in rough seas.
- Regularly check that the rope or chain is not dragging from its position and always secured.
- It is advised not to anchor the marine craft from the middle or from the rear as it may lead to risk of capsizing .
- It is prohibited to anchor the marine craft in areas that cause navigational obstruction to other marine crafts, such as in channels.
- When you throw the anchor you must make sure that nobody nearby to avoid wrapping of the rope around his leg.
- Lay the palm of the hand on the anchor rope to ensure that is steady and not dragging





Navigation lights

The navigation lights are used at night or restricted visibility at day time. Operation of these lights on the marine craft will identify their work's direction, size, type, and nature.

The lights consist of a green light on the starboard side and a red light on the port side. Both of these must illuminate an arc of 112.5 degrees (see the diagram). A forward white light illuminate 225 degrees from the horizon., And an aft white light illuminating 135 degrees from the horizon. In addition to special lights (towing, piloting, etc....)

The illumination range of the lights should not be less than :

In marine crafts that are 50m long or more,

- Mast lights 6 miles.
- Sidelights 3 miles.
- Stern lights 3 miles.
- Towing lights 3 miles.
- All-around lights (white, red, green, yellow) must be visible from at least 3 miles.

In marine crafts that are 12m long or more but less than 50m .

- Mast light 5 miles, except marine crafts that less than 20m, 3 miles.
- Sidelights 2 miles.
- Stern light 2 miles.
- Towing light 2 miles.
- All round light (white, red, green, yellow) 2 miles.

In marine marine crafts that are less than 12 meters long :

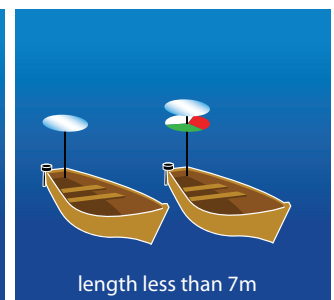
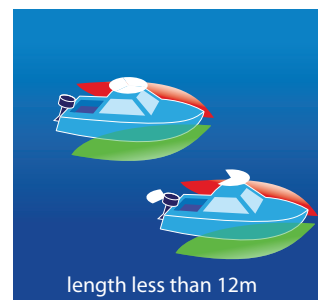
- mastlight 2 miles.
- sidelight 1 mile.
- sternlight 2 miles.
- towing light 2 miles.
- all round light (white, red, green, yellow) 2 miles

The invisible towed marine craft must show all round light that can be seen from 3 miles.

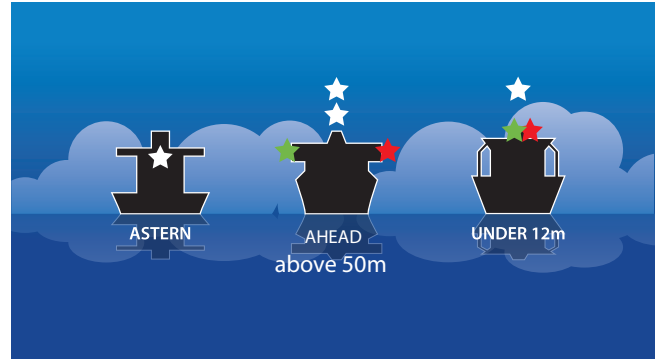
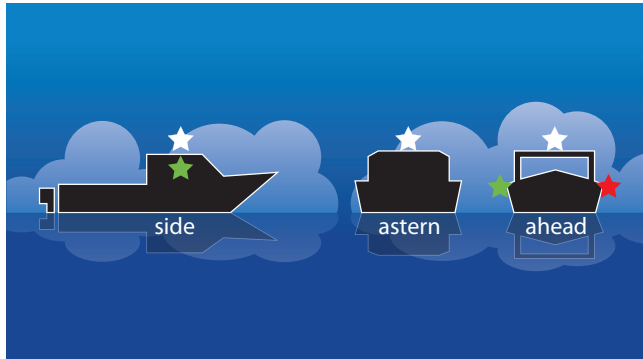
Navigation lights for various marine crafts (ships, sailing and power driven marine crafts

Power driven marine crafts that are less than 12 meters long must show any of the following:

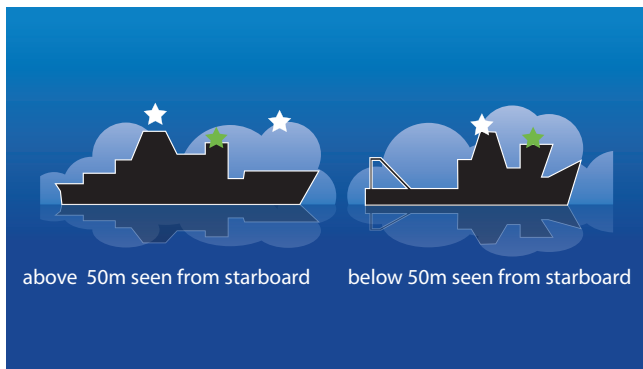
- Side lights, mast lights, stern lights,
- Side lights (or combined lights) and a all round white light
- All round light for marine crafts that are less than 7 meters in length and has speed of less than 7 knots



Marine crafts that are less than 50m in length , should have navigation lights as shown in the picture.



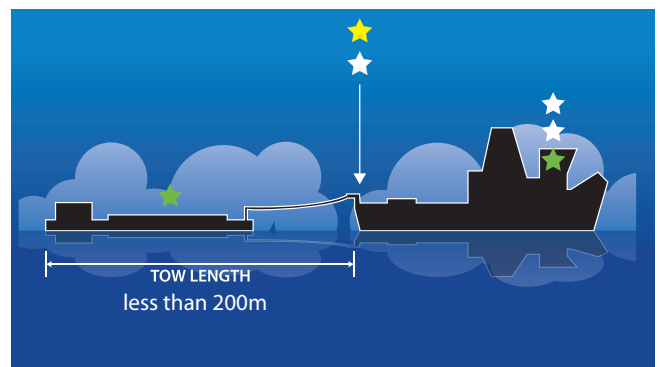
- a second mast light is optional for marine crafts with length of less than 50m.



- Marine crafts less than 12 meters in length, however, may use a combined light on the centre line of the Forward -Aft in the place of side lights.

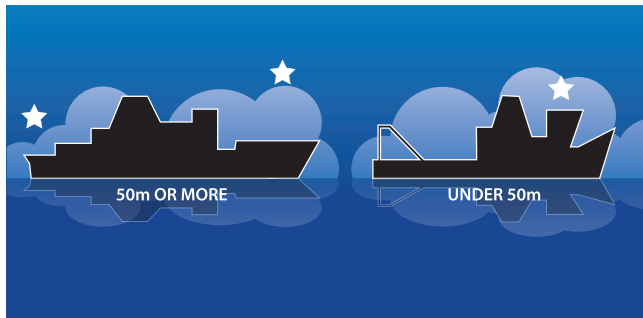
Towing

Any marine craft engaged in towing must show two mast lights; however, if the length of the tow from the Aft of the towing marine craft to the Aft of the towed marine craft exceeds 200 meters, then three lights must be shown in an upright position using side lights, stern lights and the towing light (yellow) in a vertical line above the stern light.



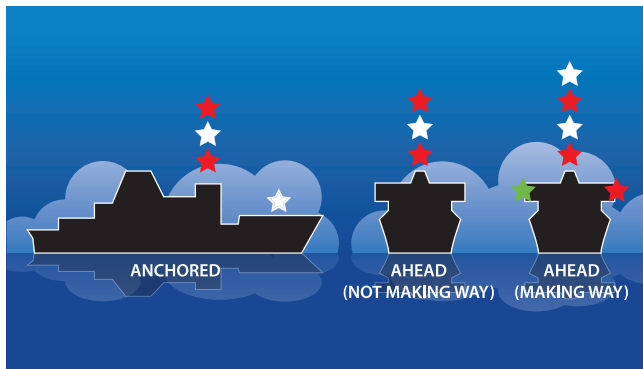
Anchored marine craft

An anchored marine craft of 50m or longer in length should show two all round lights, with the front light higher than the rear. If less than 50m, the lower light at the rear is optional.



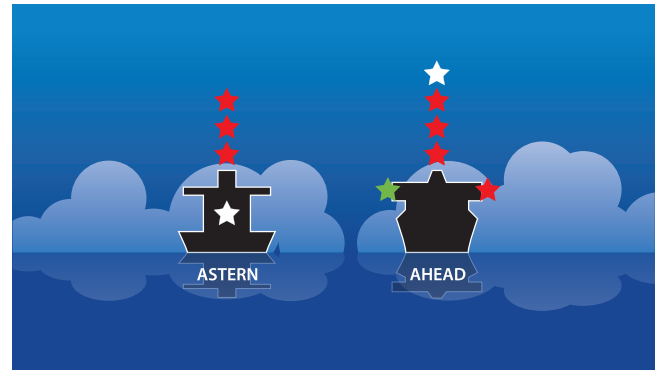
Marine craft restricted in her ability to manoeuvre

- Must show three all round lights, red for the top and bottom and white for the middle, while always sail with absolute caution.
- When underway, the marine craft must show the mast lights, side and stern lights; upon anchoring, the marine craft
- Must show the anchoring lights.



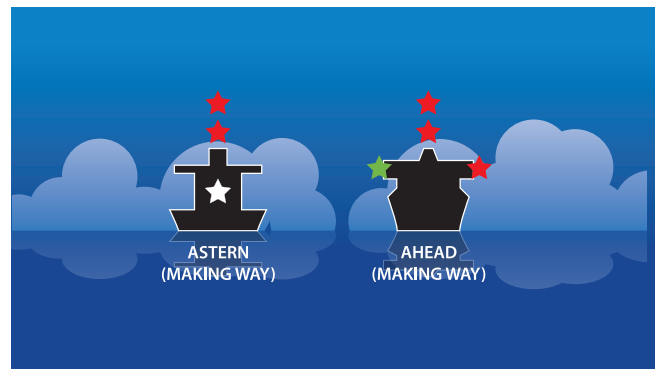
Marine craft constrained by their draught

- In a narrow channel which is not capable of altering its course must show three all round red lights.



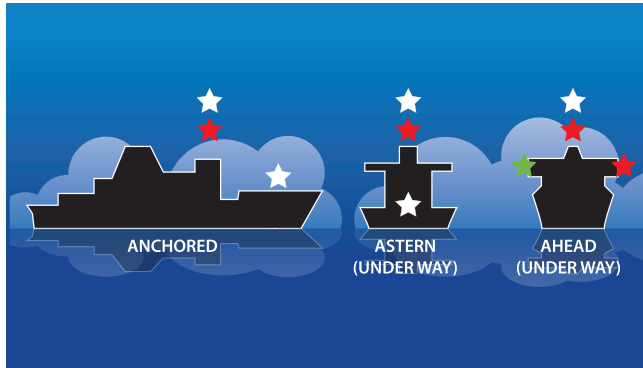
A marine craft not under command

- Must show two all round red lights and, when underway, it must show the side and rear lights.



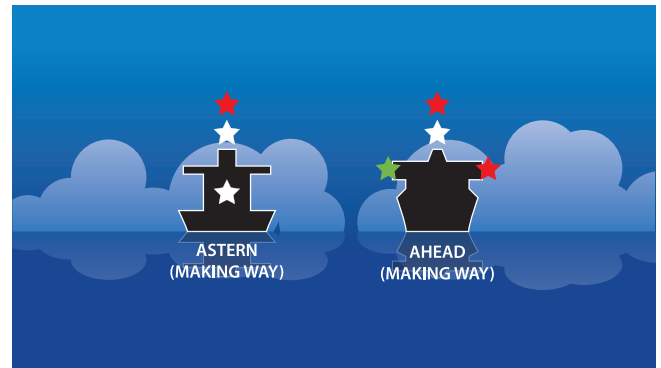
A pilot marine craft

- Must show two spherical lights, white on the top and red at the bottom.



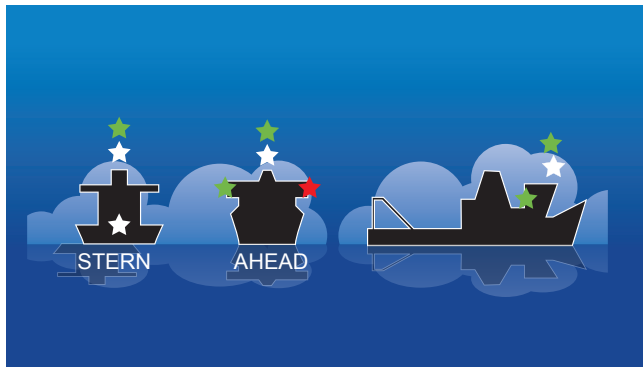
For Fishing Vessel

- Two all round lights must be shown, red on the top and white at the bottom.
- If the fishing nets(in commercial fishing marine crafts) are horizontally 150 metres or more from the boat, then a white spherical light towards the nets must be shown.



Any Trawling Vessel

- Must show two all round lights, green on the top and white at the bottom in addition to the side and Aft lights when underway.



Notes

All marine crafts should adhere to the ministry of environment laws in regards to fishing.

Take extra caution when approaching passenger ships and commercial marine crafts as there are frequently bright lights on their decks making it difficult to distinguish between these lights and navigational lights, advice to be always away of them.

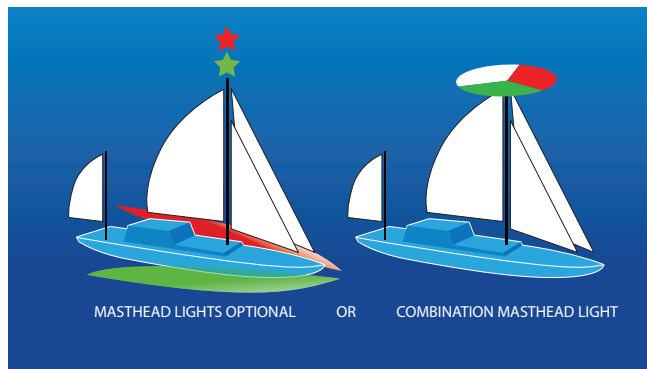
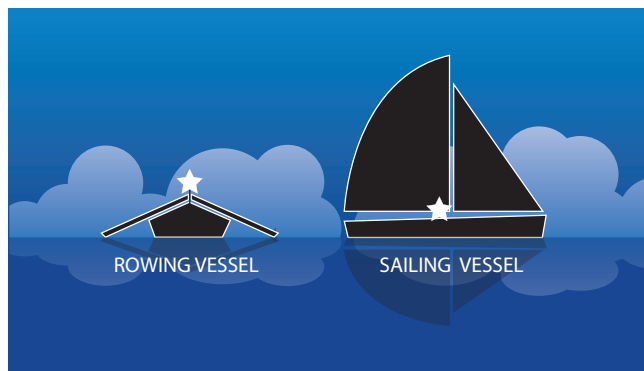
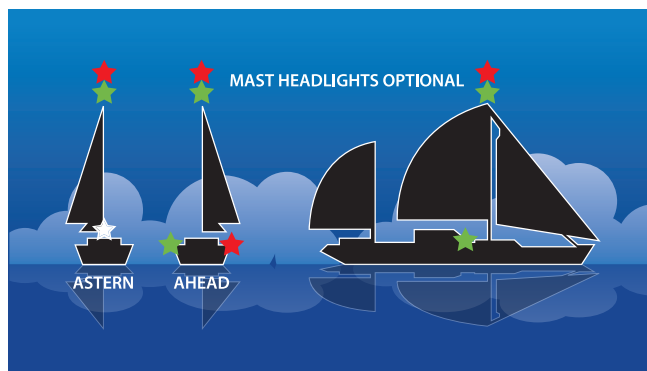
Sailing and rowing marine crafts

All sailing marine crafts should show side and Aft lights or, if the length of the marine craft is less than 20 metres, a combined light could be fixed on the top of the mast or near to the mast where it can be clearly seen.

In addition, the marine craft may use two all round lights in a vertical position so as the red light will be on top of the green light; these are to be placed at the top of the mast or close to it in a location where it may be clearly seen.

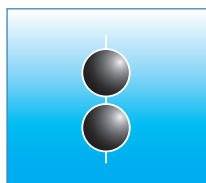
The mast headlight should not use with combination light.

Sailing marine crafts of less than 7m in length and rowing marine crafts should simply show one white all round light as depicted.



Marine craft day shapes

In order to avoid collisions, there are a series of shapes raised by a marine crafts during the day to alert other or operation, danger, or manoeuvring restrictions. Any skipper heading out into Dubai's waters would do well to learn all of these before heading out.



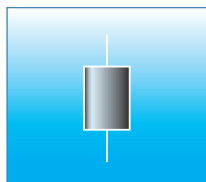
Marine craft not under command

Two black balls are used for marine crafts longer than 12 meters as a sign of their inability to manoeuvre or cruise



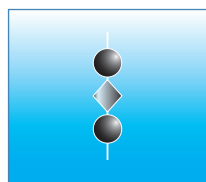
Towing and towed marine craft

A Black diamond form shall be used for each towing marine craft and for the towed marine craft if the length of the tow is more than (200) two hundred meters.



Marine craft constrained by their draught

One cylinder is used as a sign of inability to alter the course of the marine craft



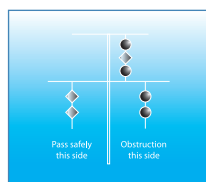
Marine craft restricted in her ability to manoeuvre

Two black balls with a black diamond in between shall be used for marine crafts with limited manoeuvring ability



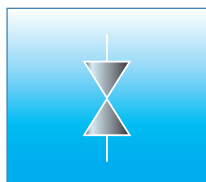
Power driven sailing marine craft

A head-down black cone-shape is used.



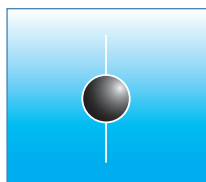
Marine crafts engaged in underwater operations

Black Balls are used on both sides as a sign that the navigation path is closed and that the marine craft must wait for directions. Moreover to the two black balls with the diamond in between that are used to denote the presence of an obstacle at the side, another two black balls along with two diamonds are used on the side which is free for the marine crafts to pass through as shown in the picture annexed.



Fishing marine craft

Head-down black cone-shapes are used.



Anchored marine craft

A Black Ball shall be used for anchored marine craft of which length is less than (7) seven metres.



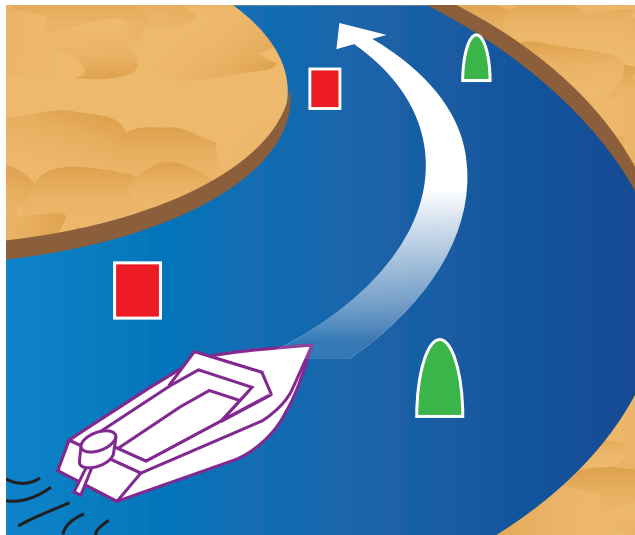
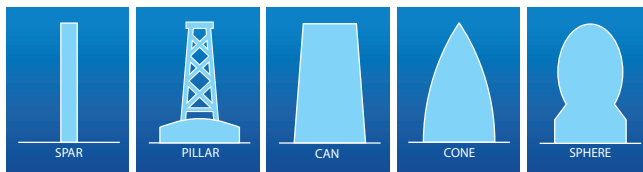
Marine crafts with divers under water

An international signal that must be placed in a visible location as shown in the picture is used for marine crafts having divers under water.

Buoys and signs

Buoys are floating objects which can take a variety of forms to maintain balance in the water. Anchored to the seabed by chain and Anchor, they are used as navigational aids and other navigational information.

Buoy shapes



The marine craft entering navigation channel must be aligned with green buoys.

Buoy types

1. Lateral Marks

Lateral marks are used to indicate the right (starboard) and left (port side) of the waterway when heading into a port or a channel, where the green (cone shape) will determine the right side into the port and the red (cylinder shape) will determine the left side of the port

2. Cardinal Marks

These buoys are used for the identification of the four basic directions (North, South, East and West) and each buoy identifies one of the four basic directions in the area. The direction that the buoy indicates tells marine crafts from which direction they should pass the buoy to avoid danger such as (shallow water, wrecks, rockets, etc...).



North Cardinal Mark



Passing it from the North side of the sign

Its upper half is black; its lower half is yellow. It has two cones with their heads directed upwards and shows a continuous fast or very fast white flash.

East Cardinal Mark



Passing it from the East side of the sign

Divided into three parts, the upper and the lower are black and the middle is yellow, at its peak it has two cones of which bases are black and are opposite to each other; they show a white flash in a form of a group of three fast or very fast flashes.

South Cardinal Mark



Passing it from the South side of the sign

Its upper half is yellow; its lower half is black, and has two cones with their base directed upwards. It shows a set of six light flashes followed by one long fast or very fast flash.

West Cardinal Mark



Passing it from the West side of the sign

Divided into three parts, the upper and the lower are yellow and the middle is black. At its peak it has two black cones. It show a white flash in a form of a group of nine fast or very fast flashes.

3. Safe Water Mark

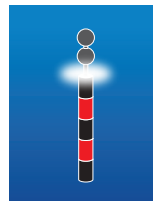
This buoy indicates that the waters around it are safe from all directions. It is also used to determine the limits of the port when coming from the sea. They are also placed temporarily after an isolated danger buoy (see below) has been removed so that marine crafts do not become confused.



Colour: White and red Vertical stripes. Has at its top a red ball and it gives a long white flash.

4. Isolated Danger Mark

Used to indicate the presence of risk directly under the buoy – such as a sinking ship, or a navigational obstacle beneath the surface of the water .



Colour: Black with one or more red stripes. Has two black balls on its top and gives two group flashes.

5. Special Marks

These determine a special area unfit for navigation – like a military training area – or to determine construction in a port or around an oil platform. They are typically used in close sets to prevent the entry of marine crafts.



Colour: Yellow with a yellow X mark at its top. The colour of the light is also yellow.

Types of emergencies

Grounding

The collision of the marine craft with the sea bed as a result of the marine craft diverting from its course. Since such a situation is not expected, the crew must take the following steps:

- Turn off the engines
- Close all water tight hatches
- Request for assistance
- Supply passengers with life saving equipment
- Start to pump water outside the marine craft using available pumps
- Make sure there are no injuries
- Start any temporary repairs, if possible
- Make a rapid initial damage report
- Take the appropriate decision regarding a method to re-float the marine craft based on the amount of damage
- Notify the official authorities of all the details

Man over board

When a person falls over board you should take the following steps:

- Shout out man over board and raise the alarm
- Throw a life buoy toward the fallen person
- Keep (or dedicate a person to keep) a constant lookout for the person in water and ask him to not to take his eyes off him
- Use low speed to approach the person in the water, keep the propeller away from him
- When you are close enough, stop engines and pull him on board
- Report to the authorities the accident with all its details.
- When you are not able to rescue him, ask for assistance and wait the rescue team to guide them to the location of the person.

Sinking Marine craft

When the floating ability of the marine craft is affected by water entering into the marine craft, the following procedure must be taken:

- Provide all personnel on board with lifesaving appliances.
- Request assistance and inform the official authorities of the details
- Operate necessary pumps in an attempt to remove water in the marine craft
- If you should go into the water, keep away from the marine craft

- Gather the passengers in one place and do not move until the arrival of the rescue team

Collision

In the event of a collision, the following actions must be taken:

- Stop the engines. If part of the marine craft has penetrated the body of another marine craft, the skippers must decide if pulling away from the other might result in it sinking; this is the decision of the skipper as required by the accident circumstances.
- Request assistance and inform the official authorities of the details.
- Operate necessary pumps in an attempt to remove water from the marine craft.
- Provide passengers with life saving equipment.
- Close all water tight hatches.
- Determine the defect and rate of water ingress to estimate the temporary repair.
- Operators of colliding marine crafts must exchange assistance.
- If the marine crafts stay afloat, every effort must be made to limit the damage and ensure no further damage occurs.
- Depending on the circumstances, the decision to abandon the marine craft depends on :

1. The expected time that the marine craft will remain afloat,
2. Weather conditions (both immediate and expected),
3. The potential risk of fire or explosion in the event of not abandoning the marine craft.

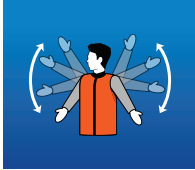
Fire

If a fire breaks out on board, the following actions must be taken:

- Stop the engines and take care not to expose any nearby marine crafts to any risks
- Request assistance and inform the official authorities of the details
- Operate the pumps to fight the fire
- Close fire hatches to surround the fire
- Provide passengers with life saving equipment
- Start a cooling operation around the fire
- Start fire fighting using available means until the arrival of official teams

Visual and Sound Distress Signals

There are many visual and audio distress signals that can be used to request immediate and necessary assistance when needed.



1. Raise and lower arms up and down slowly and repeatedly



6. Use a mirror to reflect sunlight



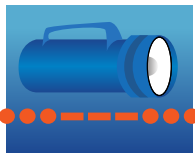
3. Raise an orange piece of cloth painted with a black box and a ball



7. Use international flags
November - N
Charlie - C



4. Use of fog horn in clear weather, emitting a continuous or intermittent sound



5. Make the SOS signal using a torch light

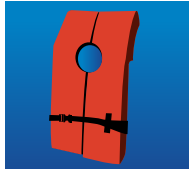


6. Use Distress signals of all varieties (hand flare, parachute rocket, floating smoke signals) according to the maker instructions.

Safety equipment

Life jackets

An approved life jacket must be provided for every person on the marine craft according to SOLAS 74 -the convention of safety of life at sea in addition to 10% for children. Children under 10 must wear life jackets at all times during the sailing of the marine craft.



There are two types of approved life jackets (or Personal Flotation Devices – PFDs).

The first: has a high level of floatation that allows the wearer to stay in a safe floating position. These come in highly visible bright colours and have reflective strips.

The second: are life vest that just keep the head above the water. Again, these come in easily visible bright colours.

Specification of life jackets:

- Can be put on within one minute
- Comfortable when use
- Remain intact and undamaged when jumping into the water from a height of 4.5 metres
- Float above the water surface.
- Provided with a whistle and light and retroreflection tape

Life buoys

These are distributed on both sides of a marine craft so that they are ready for immediate use, and can be accessed easily and quickly when required, such as in the case of a person falling overboard:



- Throw the life buoy towards the person in the water.
- Reduce the speed of the marine craft.
- Visual look out to keep the person in sight.
- Stop the marine craft near the person at a safe distance and pull him in with the life buoy.

When to use life jackets

1. In case of Emergencies
2. In case of bad weather,
3. In case of restricted visibility
4. At all times for children under 10 years old

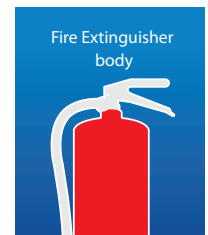
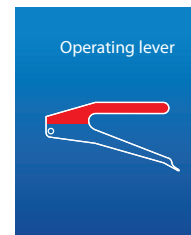
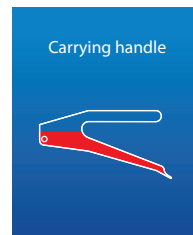
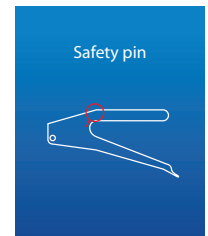
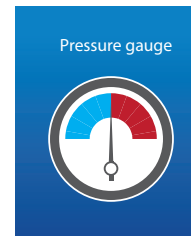
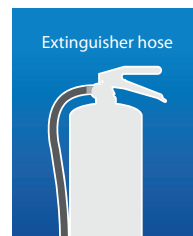
Fire Extinguishing Equipment

Portable fire extinguishers (Dry Powder)

These are used by anyone present to fight fires at an early stage. There are several types available and the type you should use differs according to the type of fire.

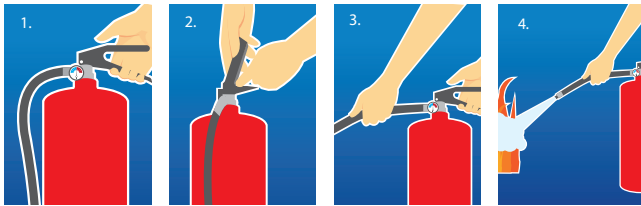
Fire extinguishers consist of:

- Extinguisher body
- Carrying handle
- Pressure gauge
- Operating lever
- Safety pin
- Fire extinguisher hose



Using a fire extinguisher:

1. Go to the scene of the fire carrying the appropriate extinguisher
2. Pull the pin from the fire extinguisher
3. Direct the ejector towards the base of the fire.
4. Press the operating lever fight fire with your back to the wind



Fire

Most fire starts due to negligence and not maintaining a proper fire prevention system, once the fire starts, its very hard to control it leaving behind life and financial casualties, and due to the existence of flammable materials on board, extreme precautions must be set and taken into consideration to avoid starting up a fire and eliminate any chance of its occurrence, and controlling it in case it starts.

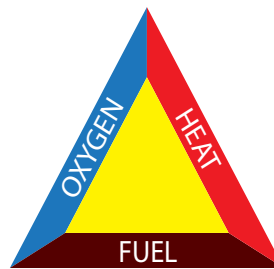
Causes of fire

The main causes of a fire aboard a marine craft are:

- Ignorance, indifference, negligence and sabotage
- Poor storage of flammable or explosive materials
- A spark
- Electrical faults
- Discarding cigarette butts near hazardous areas

Burning Process

It is a chemical phenomenon that takes place as a result of the union of inflammable substance with oxygen in the air with a certain temperature for each of the materials factor impact and such temperature is different for each substance and is called (the ignition point), so for a fire to take place, three elements must be available: fuel, heat and oxygen, a so-called triangle of fire.



How to fight fire:

To fight and stop fire, you should eliminate one or more than one factor in the fire triangle and to brake the fire triangle you should do one of the following:

1.Cooling

It is to cool down the temperature of the burning material which relays on the ability of the flaming material to absorb water on cool down, yet if the flammable material will not absorb the water, it will turn in to water vapor which will decrease the oxygen percentage to smother the fire

2.Smothering

To smother the fire, you should cover or isolate it which will preventing oxygen reaching and feeding the fire to smother the fire, you should:

Closing all vents where the fire is cover the flammable material with extinguishing foam smothering fire with (water vapor of CO₂ or Dry Chemical Powder) extinguishing equipments.

3.Starving

Starving fire will be achieved by preventing it from the burning material such as:

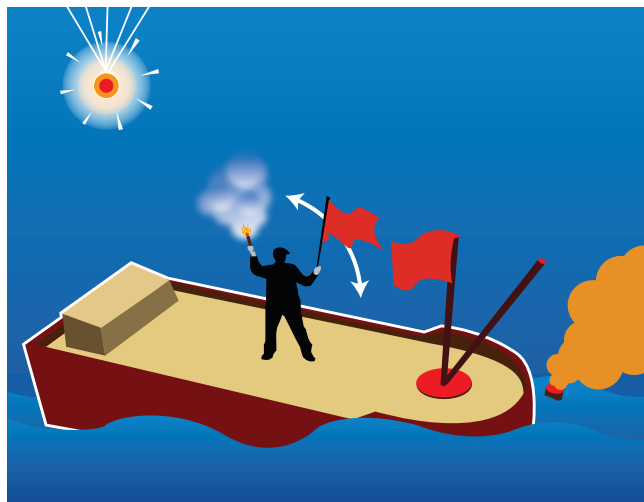
Move away flammable material from the proximity of the fire to move the flammable material to an isolated area away from any combustibles.

Distress signals

These include hand flares, floating smoke distress signals and parachute rocket signals. The orange smoke signals can be seen from 4km (10km from an aeroplane) and should be used during daylight hours in order to accurately determine your location. Hand flare distress signals have been designed to have a range of 10km and are ideally for use during the night but can also be seen during daylight hours.

The Parachute Shell (or Distress Shell) launches a red star that rises to approximately 300m. The star then ignites during its fall for a period of no less than 40 seconds. These can be seen from great distances due to both their intensity and their elevation above sea level. You should refrain from using such distress signals, however, until aircraft appear on the horizon or you make certain that you are within sight of shore or another marine craft.

You should always make sure that your distress signals are stored in a dry but easily accessible place, away from fuel or flammable materials. Make sure all the crew are familiar of the storage place, as well as the signals and how to use them.



Compass

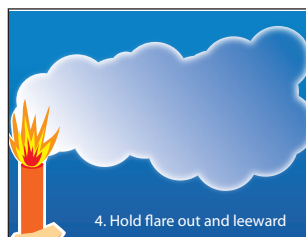
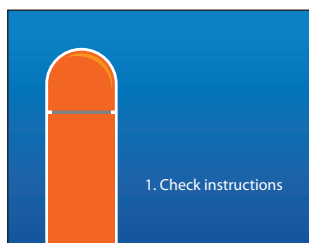
Always carry a compass on board the boat if your journey takes you more than two nautical miles away from shore.

Anchor

The anchor is one of the most important pieces of equipment on the whole marine craft and the length of the anchor, chain, rope and strength must be adequate for the area that is being used to anchor in. The rope should be tightened to the anchor at all times. It is also recommended to use a chain between the anchor and rope in order to maintain the girder of the anchor or part of it as parallel as possible to the bottom of the sea. The length of the chain must reach approximately the length of the boat.

Marine Radio

Your marine radio is the single most effective means for asking for help if your marine craft finds itself in danger. Any marine craft sailing two miles (3.2km) or more from shore should have a maritime radio.



The marine environment

The word environment in general refers to the relationship of the organism, whether a human or a plant or an animal with the environment in which they live, as well as their mutual relationship. The relationship between the organism's relationships to its environment include members of its kind and other species that share the same habitat.

The pollution is any adverse change in the natural, biological or chemical of the environment, which cause effect on human health or animal resources or vegetable or mineral or on various activities affect, though pollution is a global problem affected by all continents and seas of the world, because the land closed system and contaminants do not degrade, it will have to behave a tracks and move from one place to another and cause damage in any way to any place of the Earth's surface on land, water or in the air.

As the body of water represents three-quarters of the Earth's surface, so the size of the pollution in the hydrosphere problem equal to three times higher in the land, and there are several pollutants affected by the marine environment are as follows:

- Crude oil and its products
- Sewage
- Industrial waste residue (heavy metals)
- Thermal pollution
- Radioactive contamination
- Pesticide pollution
- Floating and suspended waste
- Sediments and solids

Any leakage of fuel used to run the marine crafts, waste oils, or waste in the sea waters, even in small quantities, will harm the natural environment. Therefore, the disposal of oil, chemicals, sewage, or waste in the marine environment is absolutely prohibited. Any example of noncompliance is a clear violation of the regulations protecting the environment in the Emirate of Dubai.

There are certain actions you should take to preserve the marine environment:

- Do not throw any solid or liquid waste in the water.
- Do not pump oil waste to the water.
- Ensure that there is no oil leakage from engines in the engine room of your marine craft.



- Conduct periodic maintenance of the marine craft engine.
- Tie the marine craft to the pier before starting to refuel.
- Turn off the engine when the boat is fuelling.
- Have fire fighting and pollution fighting equipment on standby during refuelling.
- Monitor the process of refuelling to prevent any leakage to the marine environment during the process.
- Close all hatches on the deck of the marine craft to ensure no fuel leakage to the surface of the sea.
- Thoroughly clean the supply area after finishing using oil absorbent.

In the event of a leak, you must immediately notify the authorities and do the following:

1. Stop and isolate the source of the pollution by stopping the operation process.
2. Ensure that all openings on the deck of the marine craft are closed.
3. Use oil absorbent paper sections.
4. Manually collect the equipment oil.
5. Collect the cleaning materials used for cleaning in oil-leak proof bags to be disposed of in an approved area.

Common marine pollutants

- Petroleum and petroleum products
- Sewage
- Industrial waste (Heavy Metals)
- Thermal pollution
- Radioactive contamination
- Pesticide pollution
- Floating and suspended waste
- Sediments and solids

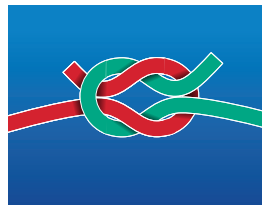
Types of marine knots and methods of their use

Knowing how to tie a marine knot that is appropriate for the situation at hand is essential for safe boating and yachting. Although dozens of knot types exist, marine knots can be divided to the following eight main categories - each one of which has a specific use and purpose.



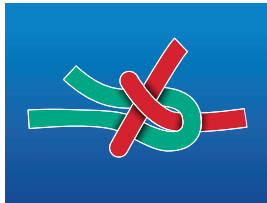
Handle knot

This knot is useful for creating a temporary loop in ropes of all types and measurements.



Reef knot

Also known as Square Knot, this combination of two simple knots is used to connect two ropes of equal measurements.



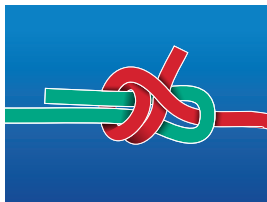
Sheet bend

Also known as a weaver's hitch, this knot is used to connect the ends of two ropes together.



Figure of 8 knot

Used to prevent ropes from slipping out of a loop; a simple knot can be used for the same purpose.



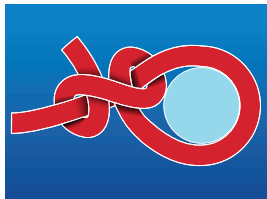
Double sheet bend

Similar to a sheet bend, this knot is used when maximum strength of connection is required.



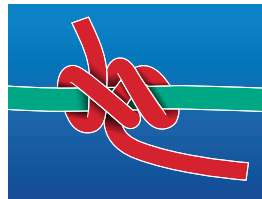
Clove hitch

Useful for connecting a rope to a pole; can be formed at the end or in the middle of a rope.



Anchor bend

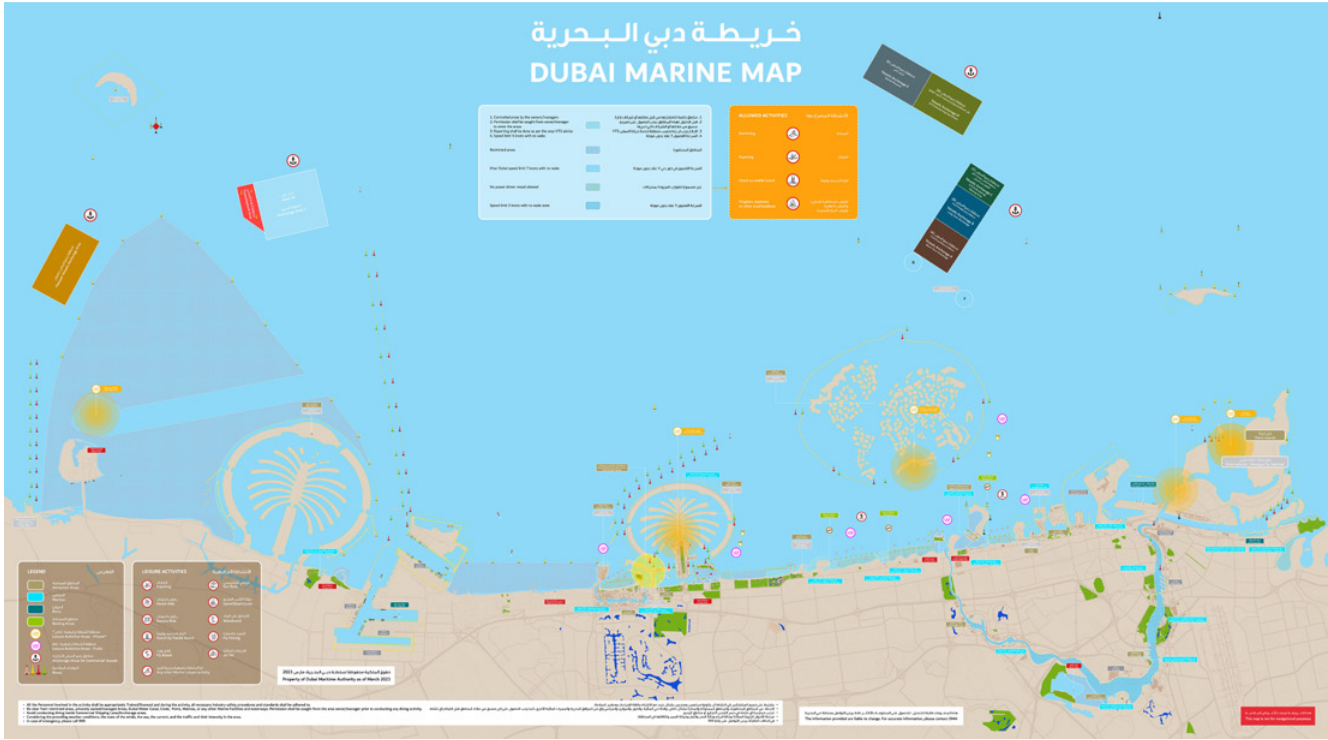
Also known as fisherman's bend, this knot is used to connect a rope to an anchor ring.



Rolling hitch

Used to attach a rope to a pole when hauling is expected to stay constant and not change directions.





Emergencies

Emergency procedures

Marine crafts can encounter a wide variety of incidents that require quick action to preserve the safety of crew and passengers, as well as the marine environment.

If you subject to accident you have to comply the following:

1. You should always have on your personal life saving equipments

2. Trigger the alarm and ask for emergency on

3. Ask for assistance by:

marine radio : VHF **channel 16**

- **999** / Police Operations in Dubai.
- **996** / Coast Guard Operations
- **04/ 3459999** Ports Police Station

4. Use Distress signals

Use it only if can be seen by any rescuer

5. Stay on board:

- Locating the marine craft is much easier from locating a stray person
- Try to anchor the boat to maintain a position if it is safe to.

Accidents procedures

If an accident does happen, you have to comply with the following:

1. Inform the operation rooms

- **999** / Police Operations in Dubai.
- **996** / Coast Guard Operations
- **04/ 3459999** Ports Police Station

2. Before reporting please consider the following:

- The exact location
- The nature of the incident
- The scene
- Number of injuries, if any
- Number of crew
- The type of marine crafts involved
- The number of marine crafts involved

3. The following cases to be reported to maintain maritime safety :

- Any foreign floating objects
- Navigational buoys with lighting that is out of order
- Marine marine crafts with lighting that is out of order
- All types of marine pollution

4. General Information

- Do not approach the foreign objects.
- Do not fishing near the oil rigs
- Do not fish inside the navigation channels.
- Do not dive near the oil rigs.

For more information, please visit the website of the Dubai Maritime Authority:

www.pcfc.ae

and social media channels:



@pcfc_dubai

For more information, please visit the website of the Dubai Police:

www.dubaipolice.gov.ae

and social media channels:



dubaipolicehq