EUROPEAN HANDBOOK FOR THE

prevention of accidents at sea and the safety of fishermen

europêche | ETF | REFOPE

Initiative of the social partners of the sea fishing sector
co-financed by the European Union / May 2007

- This handbook belongs to :

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- Phone :

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This handbook contains the minimum advice on safety and health for fishermen working on board fishing vessels. It is not a safety manual nor is it a substitute for effective training but it will hopefully raise the awareness of the need for such training, knowledge and competence with regard to safety. Use of this handbook does not exclude you from compliance with your own national and European regulations.

Caution! Procedures may vary on your vessel.

May 2007

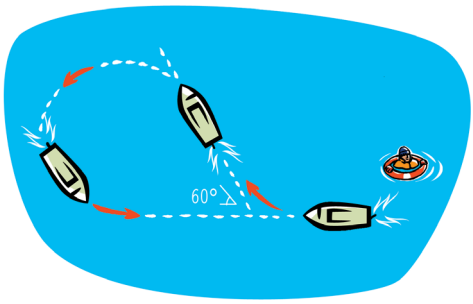
"It was 8 p.m. I was carrying supper from the galley to the wheelhouse. The sea was rough. The boat pitched violently into the trough of a wave and I lost grip of the ladder and was thrown overboard. No one saw me fall. It was dark. How long would it take the crew to realize I was missing? Would they ever find me alive?"

Thior, August 2006

Man Overboard (MOB)

Man overboard situations are a frequent occurrence on fishing vessels and in all too many cases lead to loss of life. It is vital to be ready for such a situation by knowing what to do and how to work together as a crew to recover a person from the water. Drills and discussion on how to deal with this are the best means of preparation.

TURN VESSEL towards casualty. Throw a lifebuoy overboard and mark the position



The "Williamson Turn" Helm should be put hard over towards the casualty until you have added 60º to your initial course, at which time the helm is put hard over in the opposite direction so as to bring the vessel back on its reciprocal course. In this way, the casualty should be sighted ahead of the vessel.

APPOINT a look-out to keep sight of the MOB and to guide the skipper back to the casualty

ALERT MESSAGE

TRANSMIT A "PAN PAN"

RECOVERY of a person from the water on weather side, lowest point of the vessel

ORGANISE a suitable means of retrieval, scrambling net, ladder, basket, Jason Cradle, rescue sling, or line

TREAT the casualty

Cold Shock

Cold shock is a term used to describe the initial response of a victim to cold water after sudden immersion.

SYMPTOMS

Initial deep gasping.

Rapid breathing.

Panic.

Increase in both heart rate and blood pressure.

Control your breathing

DANGERS

Inhalation of water.

Drowning.

Stroke or heart attack.

PREVENTION

Use man overboard prevention equiment.

Wear approved lifejacket.

Wear clothing with good insulation and waterproofing properties.

Wear immersion suits (dry/wet).

Hold on to some support and don't attempt to swim until symptoms have gone.

Exit the water as soon as possible.

PREVENT further heat loss.

MONITOR airway, breathing, and circulation.

INSULATE BODY and specially the head.

REMOVE WET CLOTHING if dry replacements are available.

DO NOT GIVE ALCOHOL.

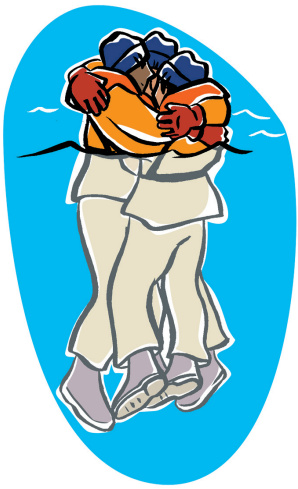
AVOID RUBBING the victim's body.

Keep the person under **CONSTANT OBSERVATION.**

Hypothermia

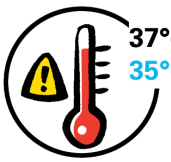
Death by hypothermia or drowning presents the greatest risk to individuals who are forced to abandon their vessel or who accidentally fall over board. Due to the ambient sea temperature, people can very quickly become so cold as to be incapable of helping themselves once in the water. Even after boarding a liferaft, there is still a possibility to succumb to hypothermia, unless individuals take the necessary survival precautions.

DO NOT SWIM unless you are very close to a place of safety.



If on your own, float **AS STILL AS POSSIBLE** in the water with your knees raised up into your chest and hands tucked under your lifejacket. Wear approved **LIFEJACKET**

If two or more people are in the water together, **FORM A HUDDLE** so that the sides of your bodies are close together



37°c [98.6°f]
35°c [95°f]

Head and neck

Sides of the chest

Groin region

There are THREE CRITICAL AREAS where the body LOSES HEAT most quickly.

Normal body temperature is **37°C**. When the inner core temperature drops below **35°C**, hypothermia begins to set in.

Personal Survival at Sea

Survival is the ability to stay alive! The decision to abandon ship should only be taken if absolutely necessary. If you have to abandon ship, your life will be threatened by a variety of dangers some of which may result in death. The most common causes of death are hypothermia and drowning.

ABANDON SHIP

GENERAL ALARM
7 short and 1 long blast of ship's whistle or verbally raise the alarm on small vessels

INSIDE THE VESSEL
Continuous ringing of alarm bells

GO to your muster station in an **ORDERLY MANNER**
Abandon ship **ONLY** when told to do so by the Skipper or person in charge.

As time and circumstances allow, **PUT ON** plenty of warm clothing. If available, wear an immersion suit.

Put on your **LIFEJACKET**, follow donning instructions.

GET OFF the vessel dry if possible.

If it is necessary to jump, stand at the deck edge.

Lock and Block.

Check below.

Look straight ahead.

Keep feet together.

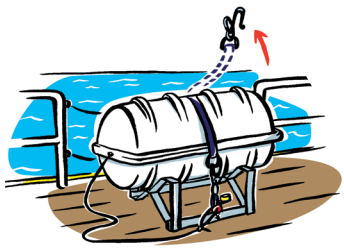
PREPARATION FOR ABANDONING SHIP

If you have time, **TAKE:**

- the vessel's EPIRB
- the vessel's SART
- a hand-held VHF radio
- fresh water
- warm clothing
- food

Know how to launch the **LIFERAFT**

Ensure that the painter is **SECURE** to the vessel



RELEASE the lashings

LAUNCH the raft

PULL the painter to inflate the raft

Pull the raft **ALONGSIDE** so that the crew can board dry

When everyone is aboard, **CUT** the painter

Pick up **SWIMMERS**

ACTIVATE THE EPIRB

GET AWAY from the vessel

LAUNCH the sea anchor

INFLATE the floor of the raft

Post **LOOKOUTS**

- Ration your water, try not to drink within the first 24 hours
- Do not eat food with salt in it
- Try not to exert yourself

NEVER drink salt water

SAVE your flares until you are sure you can attract help

DO NOT attempt to sail away from the area of the sinking ship.

TRAINING AND KNOWLEDGE OF SURVIVAL AT SEA ARE ESSENTIAL IF YOU ARE TO SURVIVE IN THE WATER

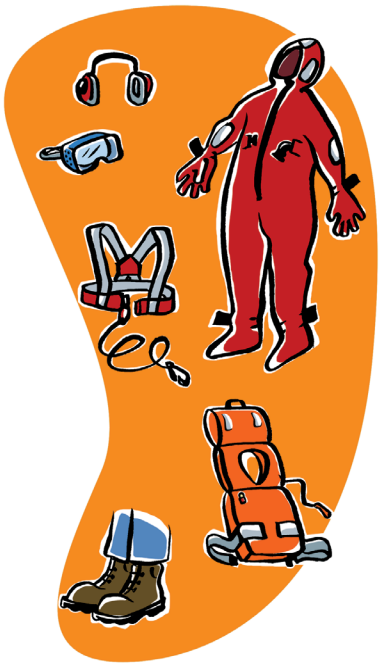
Personal Protective Equipment (PPE)

Personal protective equipment (PPE) protects individuals from residual harm after all other methods have been employed to protect the crewmember from a hazard. It is used as a last resort. PPE should include working clothing for protection from the weather. PPE must be maintained at all times in good working order and conform to the appropriate standard.

TYPICAL LIST OF EQUIPMENT

- Life jacket
- Personal Flotation Device
- Wet Gear (Oilskins)
- Gloves (various types)
- Safety boots
- Hard hat
- Safety harness
- Ear Protectors
- Goggles

All equipment must be suitable for the purpose and carry the EC mark



TRAINING

All crewmembers must be trained to correctly wear PPE such as their abandon ship lifejacket, personal flotation device, ear protectors, safety harness, or self-contained breathing apparatus.

CARE AND MAINTENANCE

Crewmembers must care for their PPE, maintain in good order and report any defects or damage to the skipper. Damaged or faulty equipment must be replaced as soon as practicable. Some pieces of equipment such as a personal flotation device will require regular inspection, annual service, and renewal of the certificate.

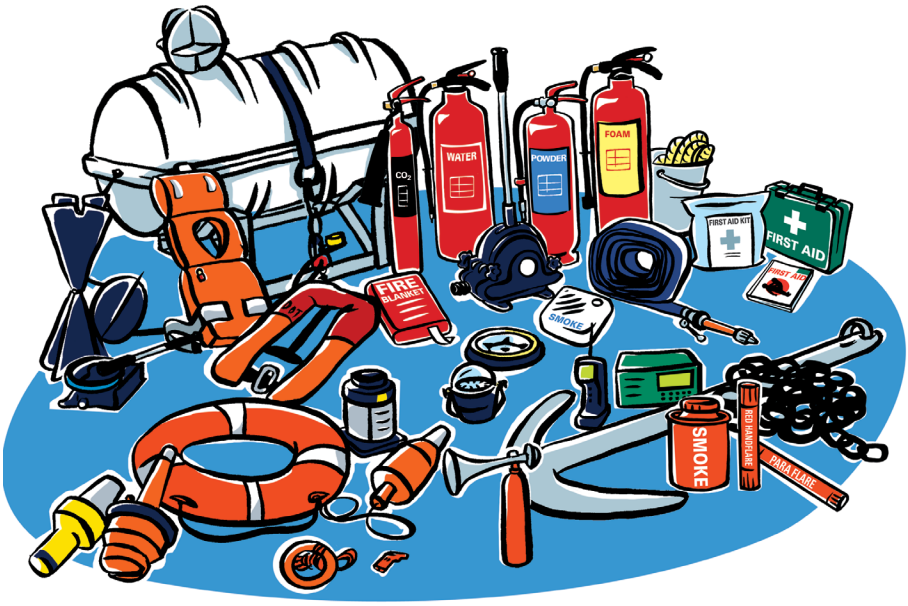
WORKING DRESS

Working clothing is also personal protective equipment and should be suitable for the expected conditions at sea regarding the working environment such as weather and temperature.

- Working clothes should fit closely to the body, no loose strings or cuffs, few if any pockets.
- Waterproof safety boots should be worn on deck.
- In wet or bad weather, clothing should have highly visible colours.
- When working in very low temperatures in fish holds, wear suitable insulating clothing.
- Safety belts and harnesses should be worn when working aloft or over the side.
- When cutting or gutting fish wear gloves which are reinforced to give protection.
- Gloves should be suitable for the task with free movement for the fingers and fit snugly at the wrists.
- Ear defenders should be worn in areas of high noise, such as engine or machinery spaces.

Life Saving Equipment (LSE)

Make sure before putting to sea that all the safety equipment required for your vessel is on board. It may save your life. Each crewman must know where this equipment is stored and how to use it in an emergency.



TRAINING

All crewmembers must be trained in Sea Survival, Man-Over-Board, Fire Fighting, Helicopter Rescue and Abandon Ship procedures and in the deployment of all safety equipment on board the vessel.

READ

Carefully read all instructions on equipment such as, **H**ydrostatic **R**elease **U**nits (HRU), Liferaft launching, Distress Flares, **E**mergency **P**ositioning **R**adio **I**ndicating **B**eacons (EPIRB), **S**earch **A**nd **R**escue **T**ransponders (SART) and Line Throwers. EPIRBS must be registered.

MAINTENANCE & SERVICE

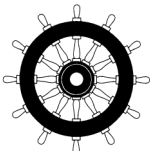
Safety equipment requires maintenance and/or service. Check the identification label for expiry dates and specific details. Check the vessel's log and update regularly.

LIFEJACKETS

A lifejacket must be capable of keeping a person afloat, turning the face up and head clear of water. Fishing vessels must carry an approved abandon ship lifejacket for each person on board. It must be SOLAS approved and have a signalling whistle, light, towing strap and retro-reflective tape.
Donning notices should be displayed where practicable in the wheelhouse and other prominent positions.
Store the lifejacket in a cool well ventilated and easily accessible area. Should the inside of the lifejacket become waterlogged, the jacket is no longer usable, get a replacement immediately.

DO NOT ABUSE YOUR LIFEJACKET BY USING IT AS A SEAT CUSHION, BOAT FENDER OR KNEELING PAD.

Type and Markings
Suggested Uses

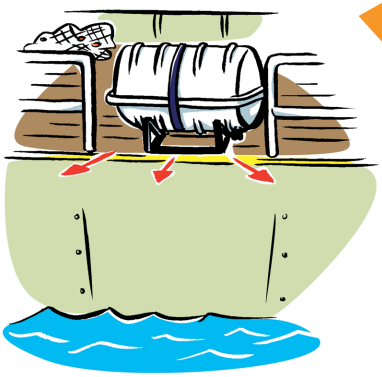


IMO SOLAS/EU Marine Equipment Directive
Use for abandoning ship.
Not intended for everyday use as they are generally bulky and they need to be kept in good condition for use in abandon ship situations.

DONNING LIFEJACKET

Practice donning your lifejacket before an emergency occurs.
Follow the donning instruction on the jacket.
Never wear clothing over the jacket.
Wear your lifejacket when abandoning the vessel.
Before entering the water, make sure the jacket is secured and hold the neck piece down with both hands.
Enter the water feet first.

LIFERAFTS



The liferaft or liferafts should as a minimum accommodate every person onboard.

Stowage

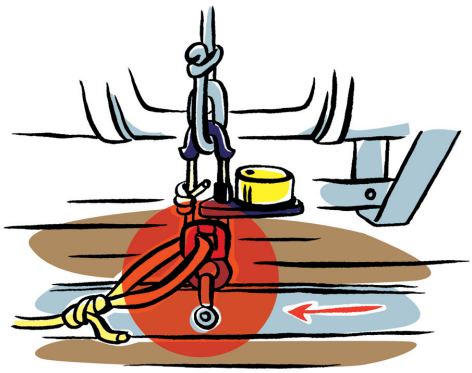
- Stow correctly, where it can be easily launched, but where it will float clear if the vessel sinks before launching.
- Stow horizontally in a suitable cradle, secured with a Senhouse slip-hook and weak link or hydrostatic release.
- Avoid exposure to paint, exhaust smoke, sparks or heavy sea or spray.
- Ensure the painter is secured to a strong point or a weak link if using an HRU.

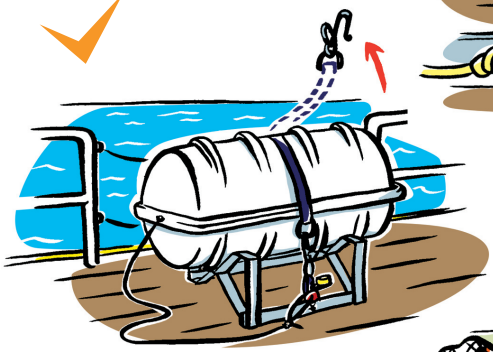
Hydrostatic Release Unit

- Follow the manufacturers' installation instruction and check to ensure they are correct.

MANUAL LAUNCHING

Undo strap securing raft
Undo painter
Lift raft from cradle
Bring to vessel side
Attach painter to a strongpoint
Ensure launching area is clear





THROW raft overboard.

Pull out painter to end and give it a sharp tug.

Bring raft alongside vessel to disembark.

DISPLAY LAUNCHING INSTRUCTIONS near by and train all crewmembers how to launch correctly.

FLARES

Flares are an effective way to signal passing aircraft and nearby boats that you are in trouble and require assistance.

THERE ARE 3 BASIC TYPES

- Red handheld flares for night-time use
- Orange smoke flares are for day use
- Rocket parachute flares can reach a height of 300 m and are used for longer range attention seeking.

HANDLING FLARES

- Flares are explosives and should be treated with care.
- Store in water proof container
- Check expiry date
- Everyone on board should know where they are stored and how to use them
- Operating Instructions are printed on all flares - always read them prior to firing!
- Do not operate flares when a rescue helicopter is in the immediate vicinity, always follow the pilot's instructions.

Helicopter operations

Great care must be taken when working with helicopters. All persons on deck should wear lifejackets and high visibility clothing where possible.

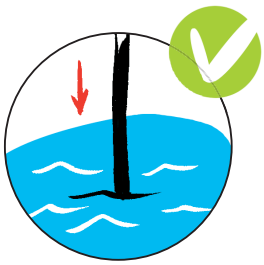
USE A HAND FLARE to indicate your position and wind direction to the helicopter, but only if requested. Never use a parachute flare.

LISTEN OUT for instructions on the radio from the pilot – he will tell you his intentions.

FOLLOW all instructions given by the pilot.

WINCHING normally takes place from the aft end of the vessel, so make sure this area is clear.

SWITCH OFF the radar once the helicopter is overhead.



ALWAYS allow the winch wire to earth in the water before grabbing it. It can contain a very considerable static charge.

DO NOT SECURE the winch wire to the vessel.

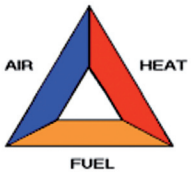
If working at night with helicopters, illuminate the deck area. **DO NOT SHINE A SEARCHLIGHT** towards a helicopter at night as the pilots wear night vision goggles, and this may temporarily blind them.

Fire

Training and knowledge are the best means of preventing or fighting a fire on board a vessel. Smoke has always been a killer in fires, not just flames. Smoke is frequently highly toxic, due to the high proportion of man-made materials.

Fire triangle

For a fire to start there must be 3 elements: **FUEL, HEAT AND AIR**



Remove any one side of the fire triangle and the fire will be extinguished.

ACTIONS ON DISCOVERING A FIRE

RAISE the alarm

MUSTER all crewmembers.
Consult **FIRE PLAN** (if one exists on board).

LOCATE nearest fire extinguisher.

TACKLE fire if possible.

"MAY DAY"

TRANSMIT if deemed serious

ISOLATE FIRE
close doors, hatches, vents, funnel flaps and portholes and keep closed.

COMMENCE
boundary cooling.

Actions for an ENGINE ROOM FIRE

- Raise the alarm
- Muster everyone
- Send a MAYDAY
- Shut emergency fuel stops
- Stop engine room fans and shut dampers
- Start the emergency fire pump and run out fire hoses
- Operate fixed fire fighting system
- Commence boundary cooling
- Leave engine room sealed off for as long as possible

A fire discovered early and attacked quickly can be brought under control and extinguished using a PORTABLE FIRE EXTINGUISHER.

- They can be carried to the fire for fast attack
- Used correctly they are very effective
- Never use water or foam extinguishers on live electrical equipment
- If the tamper proof tag is missing from an extinguisher, assume it has been used
- Never put back in service a partly used extinguisher until it has been recharged
- Maintain and service fire extinguishers at least annually

TYPE	Colour type	A solids	B liquids	C gas	D metals	E Electrical
Water	Red	✔	✘	✘	✘	✘
Foam	Cream	✔	✔	✘	✘	✘
CO^2	Black	✔	✔	✘	✘	✔
Dry	Blue	✔	✔	✔	✔	✔

FIRE DRILLS

- Should be held at least once every 14 days.
- Ensure all crew are familiar with their duties.
- Only self-contained breathing apparatus should be worn by trained fire fighting crews.

FIRE PREVENTION

Cleanliness, common sense and good personal hygiene are the best ways to prevent a fire from starting on a fishing vessel.

- Ensure fire doors are free to close
- Comply with No Smoking area signs at all times
- Never use a naked light where there are No Smoking signs
- Do not smoke in sleeping accommodation
- Put out cigarette butts safely
- Switch off electrical equipment when not in use
- Never dry cloths or clothes over cooking stove

JOINING A FISHING VESSEL FOR THE FIRST TIME, YOU NEED TO FIND OUT

- The location of your Muster station
- The location of fire fighting and life saving equipment
- The escape routes from the accommodation and below deck areas
- What your duties are in an emergency

TRAINING, DRILLS AND EXERCISES WILL INCREASE YOUR KNOWLEDGE AND ENSURE YOU CAN COPE WITH A FIRE ON BOARD.

REMEMBER ! YOU ARE ON YOUR OWN AT SEA WHEN A FIRE STARTS.

Vessel Stability

Stability of a vessel refers to its ability to stay upright in the water. It is important to keep all necessary additional weights as low as possible on the vessel.

WHEN IN PORT AND BEFORE PUTTING TO SEA

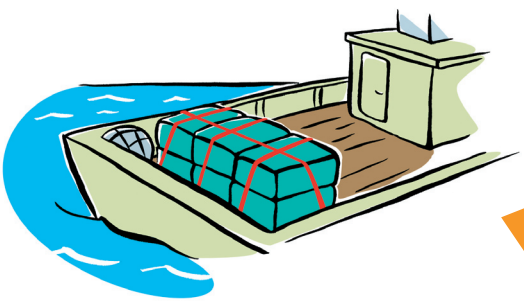
- Insure that the vessel is in as near upright position as practicable prior to departure.
- Identify any items fitted or stowed above the main deck that are unnecessary and therefore can be removed ashore.
- Anything that cannot be removed should if possible, be stowed somewhere lower.
- Check bilge levels regularly and pump out when going to sea.
- Check bilge suction points to ensure they are free of obstruction.
- Check that deck-freeing ports are in proper working order and deck drains are clear.
- Install bilge alarm in all water spaces.
- Avoid operating a vessel with a list.

VESSEL MODIFICATION

DO NOT CHANGE A VESSEL STRUCTURE, machinery or fishing gear without first seeking expert advice on the effect on stability.

ADDING OR REMOVING BALLAST

NEVER fit nor remove ballast without professional advice.

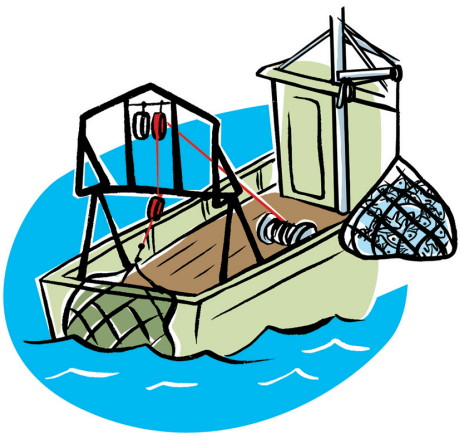


STOWAGE

As little as possible should be stowed on deck. Always secure.

Loose fish on the deck has the same effect as water. Stow the catch below deck.

Trapped water on deck creates a free surface and adds weight high up on the vessel. Keep freeing ports clear.



VESSEL OPERATION

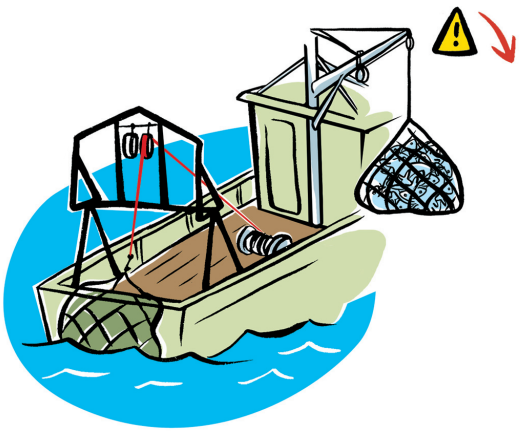
When working with gear such as trawls or dredges, towing blocks are best arranged **AS LOW AS POSSIBLE** and near the centreline of the vessel

If your vessel is not fitted with a suitable towing point lower down, you should consider having one fitted.

DO NOT LIFT POTS, NETS, COD-ENDS, ETC. from unnecessarily high points.

A load lifted out of the water has the same effect on the vessel's centre of gravity as if the weight were actually at the head of the derrick. The vessel will heel.

ALL SUCH OPERATIONS SHOULD ONLY PROCEED WITH EXTREME CAUTION!

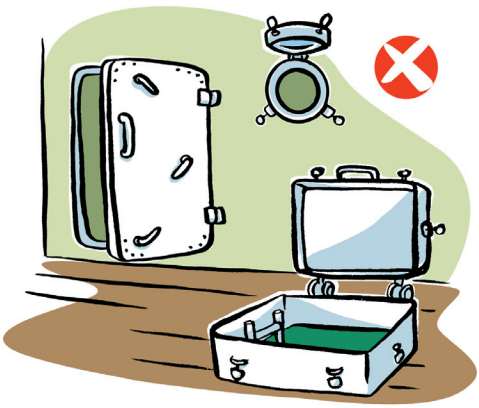


FREEBOARD

Freeboard is essential for stability.

Freeboard is the distance between the water and the working deck.

An overloaded vessel will have little or no freeboard. Overloading is a major cause of vessels capsizing.



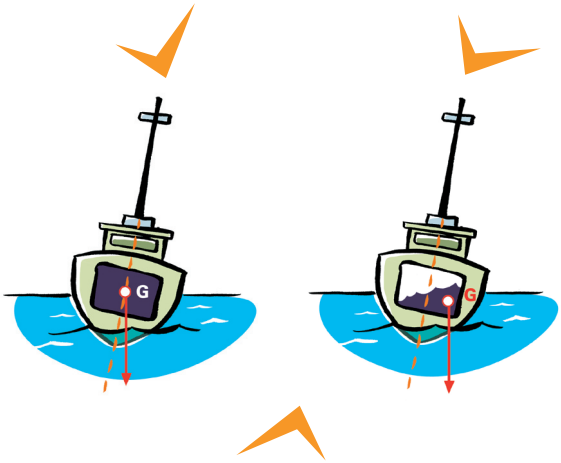
SECURE HATCH COVERS, companionways and even keep wheelhouse doors and windows closed whenever there is a risk of accidental flooding.

ENGINE ROOM OR DECK HATCHES should never be left open for ventilation and any hatches required to be open for access should be closed as soon as practicable.

FREE SURFACE EFFECT

When a vessel with full tanks heels over, the contents of the tank do not shift. The tanks centre of gravity does not change, so it does not affect the vessels stability.

In a partly filled tank or fish hold, the contents will shift with the movement of the boat.



THIS "FREE SURFACE" EFFECT INCREASES THE DANGER OF CAPSIZING. The centre of gravity moves over to the side, making the vessel less stable. To avoid this free surface effect, try to have as few partially filled tanks and compartments as possible.

For more detailed information on stability, consult the vessel's stability book or any approved stability text.

Slips, Trips & Falls

We frequently face the danger of slips, trips and falls and a lot of the time we don't even notice them or think of the possible outcome of such danger to our health and safety. It is the responsibility of every person on board to look after themselves and their colleagues. It is your duty to report any possible dangers, hazards accidents and near misses.

PREVENTION

- Keep all work areas tidy
- If you spill anything, clean it up
- Report any potential hazards
- Maintain the floor surfaces
- Post up warning signs in areas of danger
- Adjust the lighting to suit the task
- Remove all possible floor obstructions

POSSIBLE CAUSES OF SLIP, TRIP AND FALL HAZARDS

- Incorrect footwear
- Rushing around
- Uneven deck, floor or change in levels
- Loose or worn floor covering
- Slippery floors
- Spillages of oil, grease, water, powder, granules and gels
- Low lighting

First Aid

First Aid is the immediate and temporary assistance given to a casualty of an accident or a sudden illness. Crewmembers are encouraged to take a first aid course and all fishing vessels must carry a proper first aid kit.

TRANSMIT A "PAN PAN"

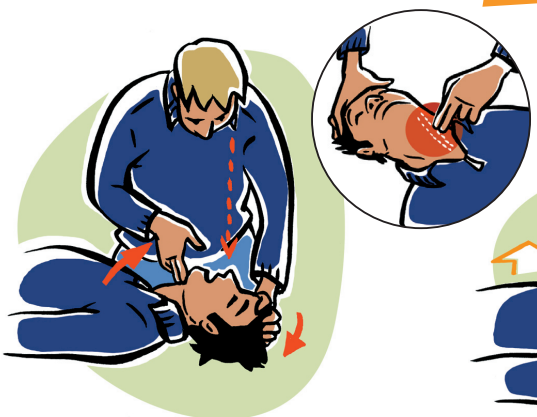
EMERGENCY AT SEA

CALL for assistance if it is required, using a Pan Pan or Mayday message on VHF as soon as possible.

BEFORE YOU GO TO SEA

Ensure that at least one person on board has had appropriate First Aid Training. **CHECK THAT YOUR FIRST AID KIT IS SUITABLY STOCKED AND STOWED** in a secure dry place. Ensure that you are carrying appropriate communications equipment and that you and the members of the crew know how to use it in an emergency

UNRESPONSIVE CASUALTY



AIRWAY

Check Airway is open.

Tilt head back and lift chin.

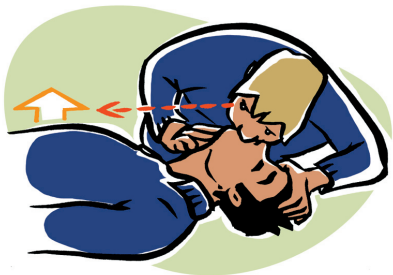
Visually check mouth for foreign objects and remove.

BREATHING

Look for rise and fall of chest or breath sounds from mouth

CIRCULATION

If there is no circulation, you will need to commence cardio-pulmonary resuscitation (CPR), this is carried out at a ratio of 30:2 (30 chest compressions to 2 rescue breaths).



MOUTH-TO-MOUTH

If casualty is not breathing normally, mouth-to-mouth is the best way to inflate casualty's lungs.

SEVERE BLEEDING

- Wear gloves to avoid cross infection
- Apply direct pressure to the wound
- Raise and support the injured part (unless broken)
- Apply a wound dressing and secure firmly in place

BROKEN BONES

- **If you suspect a broken bone, secure the limb to the body using triangular bandages**

EYE INJURIES

- **All eye injuries are potentially serious. If there is something in the eye, wash out the eye with clean water or sterile fluid from a sealed container to remove loose material. Do not attempt to remove anything that is embedded in the eye**

ASPHYXIA

Suffocation due to lack of oxygen caused by:

- Drowning
- Choking
- Strangulation
- Gassing
- Fluid in the airway
- Crushing of the chest

TREATMENT

Remove the casualty from the cause or remove the cause from the casualty. Call for medical aid and give cardio-pulmonary resuscitation if necessary.

RECORD KEEPING

It is good practice to use a book for recording any incidents involving injuries or illness which you have attended.

Include the following information in your entry:

- Date, time and place of the incident
- Name and job of the injured or ill person
- Details of the injury/illness and any first aid given
- What happened to the casualty immediately afterwards (eg. went back to work, went home, went to hospital)
- Name and signature of the person dealing with the incident.

BASIC FIRST AID KIT

For an extensive list of items for your category of vessel, please consult the website : www.refope.org

For up to five people, the basic first aid kit should contain at least:

- 1 60 ml bottle of antiseptic wound solution, or a 10-pack of antiseptic swabs.
- 1 pack of 10 disposable applicators (not needed if antiseptic swabs are used)
- 1 disposable, waterproof vomit bag
- 12 adhesive bandage straps
- 2 2.5 cm x 4.5 m lengths of bandage gauze (not needed if ties attached to dressing)
- 2 folded, 100 cm triangular bandages and 2 pins
- 2 sterile dressing compresses, about 7.5 cm x 12 cm

- 4 pieces of sterile dressing gauze, 7.5 cm x 7.5 cm
- 1 splinter forceps
- 1 eye pad with shield or tape
- 1 First Aid Record
- 1 pair of 10 cm scissors
- 1 roll of surgical adhesive tape, 1.2 cm x 4.6 m (not needed if ties attached to dressing)
- 1 30 ml bottle of antipuritic lotion or a 10-pack of antipuritic swabs
- 1 elastic bandage, 7.5 cm x 5 m
- 1 pocket-size emergency blanket
- 1 container of hand cleanser or packet of cleaning towelettes
- 1 splint with padding
- 1 10 cm x 10 cm burn dressing
- 1 current First Aid Manual

CALLING FOR HELP

IF YOU REQUIRE MEDICAL ASSISTANCE CONTACT THE NEAREST MARITIME RADIO STATION USING CHANNEL 16 VHF OR 2182 MF

Should you have difficulties, send a Pan Pan urgency call:

Select Channel 16 or 2182 MF

Press the transmit button, and say slowly and clearly:

Pan Pan, Pan Pan, Pan Pan.

All Stations (repeat 3 times)

This is … (repeat the name of your boat 3 times)

My position is… (use latitude and longitude, or a true bearing and distance from a known point…….If you don't know, don't guess.

I require (describe type of assistance that you require e.g. "I require medical assistance").

Over - this means please reply

Now release the transmit button and listen for a reply

Keep listening on Channel 16 or 2182 MF for instructions

If you hear nothing then repeat the call.

Emergency Communications

MAYDAY PROCEDURE

Used when vessel is in "Grave and Imminent danger"

"MAY DAY
MAY DAY
MAY DAY"

CHECK that your radio is switched on and high power setting is selected

SELECT CHANNEL 16
and speak slowly and clearly

Activate
"DISTRESS BUTTON"
on DSC

THIS IS
(Repeat name of vessel x 3 times)

POSITION
Lat/Long or true bearing and distance from a known point

I AM
State problem (such as sinking, on fire, etc.)

I REQUIRE IMMEDIATE ASSISTANCE

ADDITIONAL INFORMATION
Nº of persons on board,
any actions being undertaken
List available equipment, such as EPIRB, SART, f lares

OVER

- Release the transmit button and wait for a reply
- Keep listening on Channel 16
- If you hear nothing repeat the distress call

Manual Handling and You

Before lifting or moving any load, consider if it can be done using a mechanical means such as a crane, lifting derrick, trolley or other.
If it must be lifted manually, then follow the steps below.

Do you need **HELP** with the load ?
REMOVE any obstructions/obstacles in your intended path

FEET APART

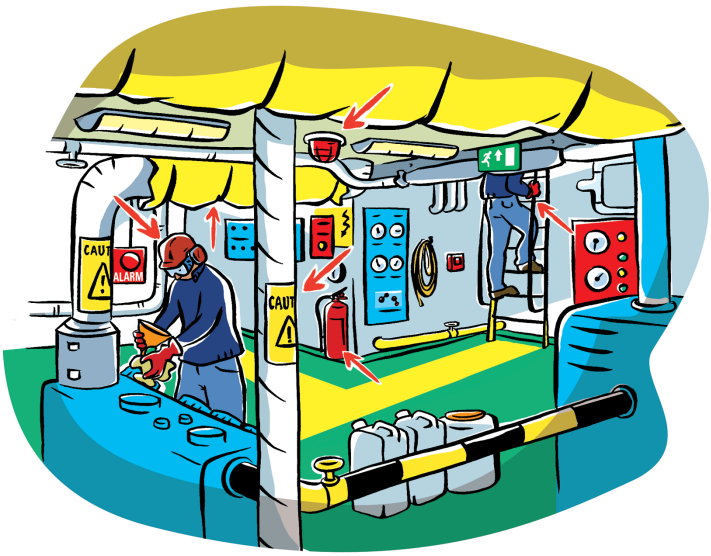
PUT DOWN THE LOAD, then adjust its position

- Keep a firm grip on the load
- Keep the load close to the trunk
- Avoid twisting or leaning
- Keep the head up
- Shoulders and hips in same direction
- Look ahead, not down at the load once it is held securely

Never lift or handle MORE THAT CAN BE EASILY MANAGED !

Engine Room

Space is very limited aboard any fishing vessel therefore good engine room housekeeping is essential for safe working and access and egress. Engine rooms may be either manned or un-manned. Before entering and immediately after leaving an unmanned engine room, inform the vessel watch keeper. Ensure regular checks are carried out in the engine room and on its equipment.



ACCESS TO ENGINE ROOMS

- Ladders should be in good condition with secure handrail
- Always go backwards down an engine room ladder.
- Never store plastic oil drums or rubbish at the bottom of the ladder as they present a fire and trip hazard.
- Keep walkways clear and in good order.
- Engine room deck plates or gratings should be secured
- Handrails and guards should be secure and placed in areas preventing accidental falling onto dangerous rotating machinery.

ESCAPE ROUTES

- All exits and escape routes should be checked regularly to ensure they are clear.
- Dogs and hinges on escape hatches must be operated to ensure they are free to open.
- Ensure nothing is blocking the escape hatch from opening out onto the deck.
- Ensure any harbour locking devices are removed when vessel is manned.

HYGIENE

- Wear suitable personal protective equipment such as ear, eye, head, foot and hand protection (mandatory signs).
- Use hand cleaning soap and barrier creams for skin care and prevent dermatitis.

- Wipe up oil spills immediately to prevent slip accidents or cause a fire.
- All loose items must be stowed securely and safely.
- Secure all doors and hatches to prevent from swinging.
- Display signs and notices clearly.

NOISE

- When machinery is running, always wear ear protectors to prevent damage to your hearing.

ALARMS

- Know the sound of all engine room alarms/signals and what they mean.
- Check alarm operation regularly.
- Ensure alarms can be heard over normal machinery noise and ear protectors.

LIGHTING

- Illuminate all working areas adequately, including walkways and areas behind machinery where maintenance has to be carried out.
- Test emergency lighting regularly.

HEAD ROOM

- Warning signs should be put in place on low overhead pipe work.
- Care should be exercised when walking around to prevent head and neck injuries.
- Pipes and sharp edges should be padded to prevent an injury.

MOVING MACHINERY AND HOT SURFACES

- Moving or rotating machinery must be guarded to prevent accidental contact.
- Replace all machinery guards after work has been completed and prior to start-up.
- Hot surfaces and pipes should be guarded or lagged.
- Remember that machinery may be started remotely or by automatic start.

ELECTRICAL

- Before working on electrical equipment, always isolate it, remove fuses, lock it off & fit warning signs.
- Batteries should be in a battery box which has a vent pipe mounted at the top of the box, which is then piped to outside deck.
- Use 24V hand lamps for inspection.

ENGINE ROOM EMERGENCIES

Flooding

- Check bilge alarms regularly.
- Check all water pipes for security and condition regularly.
- Check bilge pipes and valves and close valves when not in use.
- Ensure sea suction valve to bilge pump is closed off.
- Exercise an emergency response for flooding.

FIRE

- Practice emergency procedures for fire.
- If a fixed fire fighting system is installed, know its operation.

REFRIGERATION LEAK

- Know how to isolate a refrigerant leak.
- Refrigerant gases may cause asphyxiation and suffocation.

Galley

The Galley is the common meeting area on a trawler and is a very busy place presenting hazards such as fire, burns, scalds, slips and falls, and possible food poisoning.

PREVENTION

- Cooking by gas stove : care must always be exercised when cooking on open ringed cookers.
- Never hang cloths or clothing over the cooker to dry.
- Never leave a cooking stove unattended.
- Gas bottles must never be stored in the galley, but in a well ventilated area or out on deck. Ensure controls are turned off when gas appliances are not in use. Gas is heavier than air and will collect in the bottom of the galley or lower down in the vessel.

- Keep the protective rails in place around stoves and use fiddles or guards on top of it to prevent pans sliding.
- Know the location and how to use a fire blanket and fire extinguisher.
- Fire extinguishers in the galley must not be of the water type.
- Never use a chip pan on board a fishing vessel.
- Never pour water onto hot fat, the water explodes into steam throwing fat out of the pan and this may cause burns.
- Only use non-slip mats on the galley floor.
- Electrical equipment must be in perfect condition and faults must be rectified immediately.
- Use oven gloves to remove hot pans from the oven.
- Only use a tin opener to open tinned food.

KNIVES

- Keep all knives, choppers, and saws sharp and clean.
- Check their handles are secure and free from grease.
- Store in a rack or a specific drawer.
- Never leave them on benches or submerged in sinks where their unseen blades may be grasped.

HYGIENE

- Always wash your hands before preparing or eating food
- Cooked foods should be kept in a fridge
- Order and cleanliness must be scrupulous in order to avoid the presence of animals (rats, mice) or insects (flies, cockroaches), which might damage food or endanger the health of the crew. Dispose of galley waste when in harbour.
- Cold rooms must be equipped with opening devices and alarms which can be activated from inside. Persons who enter such places must be sufficiently familiar with them to be able to find the door or alarm in the dark.

Alcohol, Medicine, Drugs and Fatigue

Alcohol, medicine and drug abuse on board a fishing vessel can cause serious problems. It is illegal to bring controlled drugs onboard a fishing vessel and possession or use on board should not be condoned or permitted. If alcohol is permitted onboard put a policy in place to manage access and consumption.

ALCOHOL AND DRUG USE AFFECTS

- The ability to make good decisions
- Personal coordination
- Motor control and judgement
- Concentration and alertness

CONTROL OF ALCOHOL, MEDICINE AND DRUGS

- Don't bring illegal drugs on board
- Don't use illegal drugs on board
- If alcohol is permitted on board, don't drink too much or too close to when you need to be ready for work
- Don't work machinery or take a watch when you are under the influence of drugs or alcohol.

FATIGUE

- Fatigue is extreme physical or mental tiredness preventing you from doing your work properly and safely thereby putting your life and the lives of your crew at risk.

PREVENTION OF FATIGUE

- Ensure all crew have adequate rest periods
- Ensure the night watch have various activities to keep them active
- Install watch keeper alarms if considered necessary

Dangerous Chemicals

WHAT THE LABELS TELL YOU !
READ THE LABEL FOR YOUR HEALTH AND SAFETY

Chemicals are used in everyday materials such as, fuel, oils, detergents, paints, adhesives, bleaches, cleaning agents and disinfectants. They are essential for everyday life but can be dangerous.

If not used correctly they can:
- **Catch fire**
- **Cause burns**
- **Damage your health**
- **Cause environmental damage**

HAZARD WARNINGS

 E - Explosive	 O - Oxidising	 F+ - Extremely Flammable	 F – Highly Flammable	 T+ - Very Toxic
 T - Toxic	 Xn - Harmful	 C - Corrosive	 Xi - Irritant	 Dangerous for the Environment

For more information on a particular chemical, contact the supplier for a Safety Data Sheet (SDS). Safety Data Sheets provide more technical and detailed information about the chemical and how to use it safely covering, storage, fire precautions, first aid, PPE, waste disposal and more.

REMEMBER ! DISPOSE OF EMPTY CONTAINERS SAFELY

Safety Signs and Signals

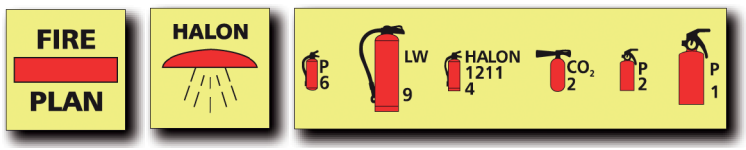
Safety Signs are used onboard to help you make safe and good decisions and inform you of safety related matters. The purpose of signals and alarms is to call attention to something without removing the danger.

SIGNS ARE DIVIDED INTO GROUPS:

SIGN	GROUP	EXAMPLE OF USE
	Prohibition signs	Stop signs Prohibition signs (no admittance) Emergency shutdown devices
	Warning or hazard signs	Identification of dangers (hot surface, fire, explosion, electrical, chemical hazards, etc.) Identification of steps, dangerous passa-
	Mandatory signs	Obligation to wear individual safety equipment such as ear protectors
	Emergency signs	Identification of emergency routes and emergency exits Assembly points, safety showers, first aid stations and rescue points
	Fire Equipment signs	Fire fighting equipment signs

In the event of a power failure, escape routes indicated by photoluminescent signs will guide you during an emergency evacuation.

SEE SAMPLES OF ESCAPE, FIRE AND SAFE CONDITION SIGNS USED ON BOARD VESSELS.

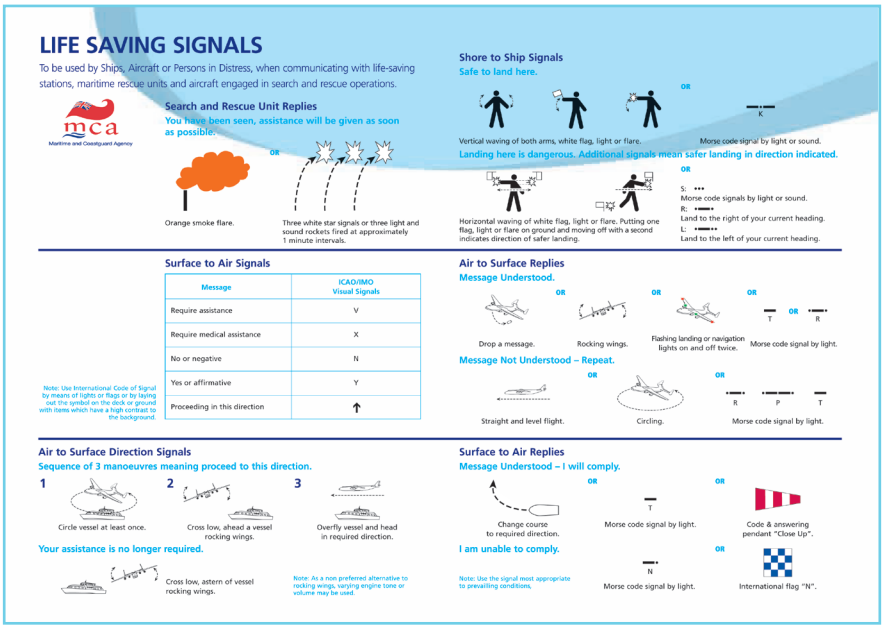


GET TO KNOW THE SAFETY SIGNS ONBOARD YOUR VESSEL !

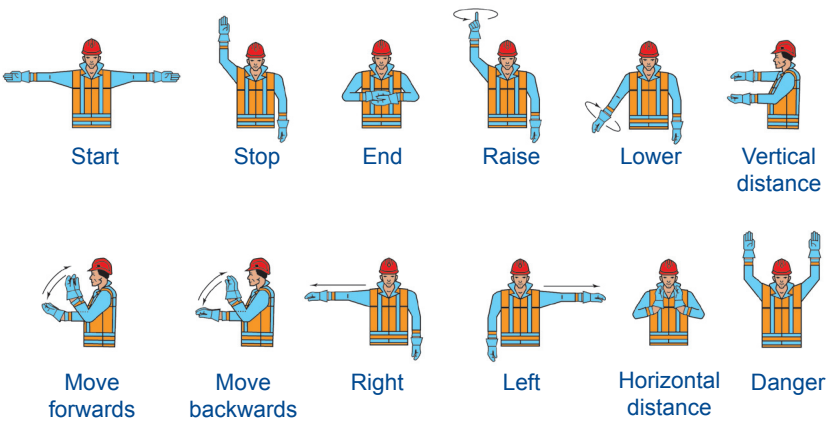
INSTRUCTION SIGNS

Caution! Always check your interpretation of signs on control levers regarding the direction of movement or rotation of deck cranes or machinery before use.

SIGNALS TO ATTRACT ATTENTION



DIRECTING WINCH OR CRANE OPERATIONS



Risk Assessment

Vessel owners and employers are required to evaluate risks to safety and health and take action to improve the level of protection given to workers in a process called risk assessment. This can be broken down into a number of steps. The object of doing the risk assessment is to help you, as owner/operator, to identify any areas or activities that may place the health and safety of others at risk. It will help you decide if improvements or precautions can reasonably be made. Risk assessment is not just a paper exercise, it is your own safety check.

IT IS NOT A TEST OF 'HOW SAFE IS YOUR VESSEL

TERMS EXPLAINED

Hazard	Anything that can cause harm.
Risk	The chance of harm being done.
Accident	An unplanned event, which results in harm to people, equipment or the environment, damage to property, or loss of product.

5 ESSENTIAL STEPS TO RISK ASSESSMENT

STEP 1: Look for the hazards on your vessel
- Walk around and make a list of the hazards onboard
- Involve your crew in identifying hazards

STEP 2: Decide who might be harmed and how
- consider members of your crew such as: engineer, deck hand, young or inexperienced worker, lone worker

STEP 3: Evaluate the risks and decide whether the existing precautions are adequate or whether more should be done, consult with your crew and consider if the controls:
- meet the standard or any national legal requirement
- comply with a recognised industry standard
- reflect good practice
- reduce risk from the hazard as far as reasonably practicable

STEP 4: Record your findings
- Risk assessment must be in writing and
- communicated to all crew members

STEP 5: Review your assessment and revise it if necessary
- at least annually or if a change,
- following any change of procedure, equipment or system of work

Follow the steps for each hazard identified in step 1

DON'T BE OVER COMPLICATED !!!

A RISK ASSESSMENT IS A EUROPEAN UNION OBLIGATION IN ALL WORK PLACES INCLUDING FISHING. RISK ASSESSMENT MUST BE IN WRITING AND THERE ARE MANY FORMS AVAILABLE.

The outcome of «risk assessment» should provide you with a safe system of work and help you identify the need for training and the use of personal protective equipment.

NAME DETAILS	RISK ASSESSMENT	RISK REVIEW ASSESSMENT
Name	By	Date
Registration No.	Date	
Length OL	Signed	

STEP 1	STEP 2	STEP 3
List significant hazards here	List people or groups of people who are at risk from the hazard	List existing controls in place. Identify additional controls necessary if required and any further actions needed.
Example: Falling over board	Crewmember	1 Work safely when on deck 2 Wear your PFD when on deck 3 Don't over reach when working near the side rails 4 Attach a safety line when working/ reaching over the side 5 Wear a safety line when working aloft

CONSULT THE FOLLOWING WEBSITE FOR ADDITIONAL INFORMATION IN YOUR OWN LANGUAGE

- **«EU Risk Assessment Essentials» and EU Fact Sheet n°38 on Fishing :**
  European Agency for Safety and Health at Work
  http://osha.europa.eu

Accident Reporting

All accidents and injuries must be recorded in the vessel's log or in an accident report book. Accidents must be reported as soon as is practicable and should contain relevant information as listed below. Reports should be sent by the quickest means available, including telephone, facsimile, or e-mail, to the National Ministry or National Authority, where the vessel is registered.

IT IS THE RESPONSIBILITY OF THE VESSEL SKIPPER TO DOCUMENT AND REPORT AN ACCIDENT

ACCIDENTS OR INCIDENTS WHICH MUST BE REPORTED

- Death or disease
- Occupational accident, major or serious
- Near miss situation
- Vessel breakdown
- Vessel collision
- Vessel grounding
- Vessel fire

INFORMATION NEEDED IN REPORTS

Initial reports of accidents should include as much of the following as possible:

- name of vessel and IMO, official or fishing vessel number
- name and address of owners
- name of the master, skipper or person in charge
- date and time of the accident
- where from and where bound
- latitude and longitude or geographical position in which the accident occurred
- part of ship where accident occurred if on board

  weather conditions
- name and port of registry of any other ship involved
- number of people killed or injured together with their names, addresses and gender
- brief details of the accident, including sequence of events leading to the accident
- extent of damage and whether accident caused pollution or hazard to navigation

OCCUPATIONAL MAJOR INJURY MAY BE ANY ONE OF THE FOLLOWING:

- any fracture
- any loss of a limb or part of a limb
- dislocation of the shoulder, hip, knee or spine
- loss of sight (whether temporary or permanent)
- penetrating injury to the eye
- any other injury:
  - leading to hypothermia or unconsciousness
  - requiring resuscitation
  - requiring admittance to hospital or similar for more than 24 hours
  - if at sea, requiring confinement to bed for more than 24 hours

«Occupational Serious Injury» applies to any injury occurring to a person onboard a fishing vessel and which results in:

- incapacity for more than 3 consecutive days, excluding the day of the accident

or,

- the person concerned being put ashore.

Useful Links

EUROPEAN INSTITUTIONS AND ORGANISATIONS

- European Union
  http://europa.eu
- EUR-LEX (European legislation)
  http://eur-lex.europa.eu
- European Agency for Safety and Health at Work
  http://osha.europa.eu
- REFOPE (European Network for the Professional Training and Employment in the maritime fishery sector)
  www.refope.org
- Europêche (Association of National Organisations of fishing enterprises in the EU)
  www.europeche.org
- General Confederation of Agricultural Co-operatives in the European Union (COGECA)
  www.copa-cogeca.be
- European Transport Workers' Federation (ETF)
  www.etf-europe.org

INTERNATIONAL ORGANISATIONS

- International Labour Organisation (ILO)
  www.ilo.org
- World Health Organisation (WHO)
  www.who.int
- International Maritime Organisation (IMO)
  www.imo.org
- Food and Agriculture Organisation of the United Nations (FAO)
  www.fao.org

Note to the reader

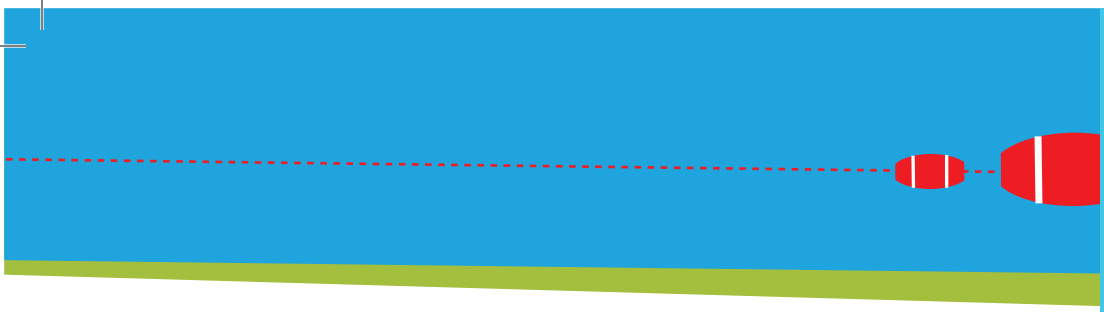
This handbook can be downloaded for free in different languages on the following websites :

http://www.europeche.org
http://ww.etf-europe.org
http://www.refope.org

Please do not hesistate to send us your comments to help us improve this handbook in future editions :
europeche@europeche.org

We hope that you have found this handbook informative and useful.
Francisca Martinez Toledo
Project Manager
Europêche

Notes



EUROPEAN HANDBOOK FOR THE

prevention of accidents at sea and the safety of fishermen

We wish to thank all experts who helped with the writing of this document, and in particular the Irish Sea Fisheries Board (BIM) www.bim.ie

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