

Risks and preventive measures

SMALL-SCALE FISHERIES



National Health and Safety Awareness Plan for
the Fishing Sector

safety
saves  **lives**

Title: Risks and preventive measures: small-scale fisheries

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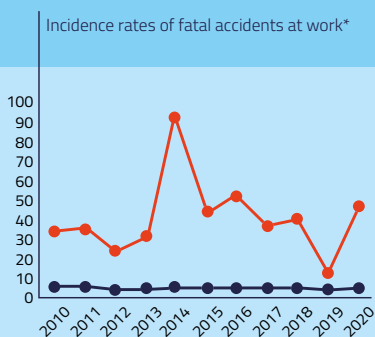
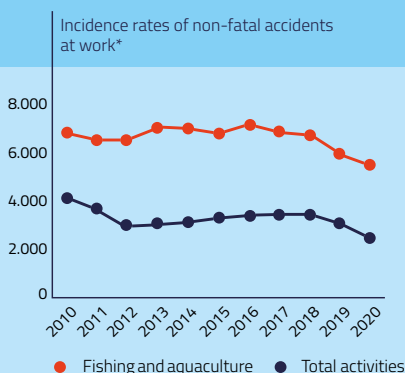
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Fishing: a very dangerous sector

The accident rate in fishing is twice the average rate of all occupational activities.



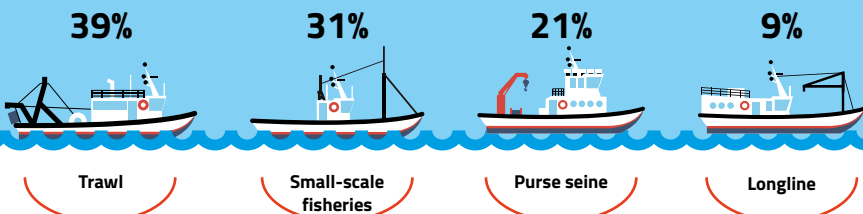
Fishing has been and continues to be one of the economic activities with the highest occupational accident rates, doubling even those of other activities. Fatal accidents are 10 times more frequent in fishing than in other sectors.



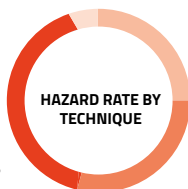
Source: Ministry of Labour and Social Economy (2020).

*Accidents per 100,000 persons employed

By fishing gear



- Trawl 37%
- Purse seine 33%
- Longline 26%
- Small-scale fisheries 4%



Small-scale fisheries account for **31% of the serious and fatal accidents** investigated by the ITSS between 2011-2020; but they are the fishing technique with the **lowest hazard rate (4%)** if we consider the vessels registered, almost 80% of the fleet in Spain.

Source : accidents under investigation by the ITSS (2011-2020).

National Awareness Plan



This Plan aims to raise awareness among workers in the fishing sector of the importance of maritime safety and **health and safety at work**.

The objective: to contribute to improving safety at work and reducing the high accident rate in the sector.

SEA ACCIDENTS

Hazards of the vessel at sea

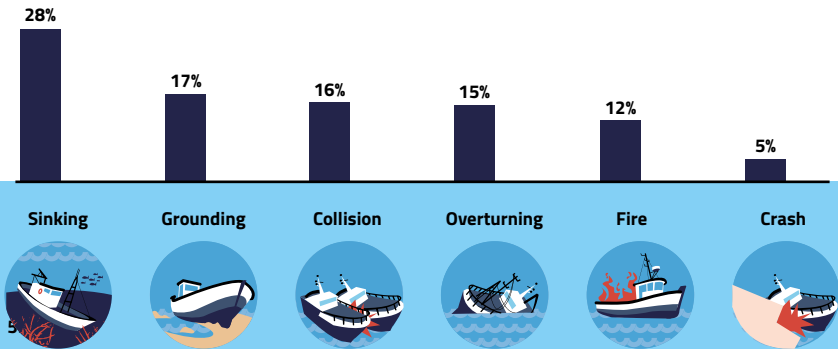
They affect the entire vessel as the workplace.
They affect the entire crew.
They sometimes take the lives of many workers.



Sinking is the most frequent sea accident due to waterways, loss of stability or flooding of spaces.

Fires usually start in the engine room, galley or cabins.

Percentage of accidents



Sinking and overturning accounted for 50% of maritime accident fatalities

Source: CIAIM (2010-2020).

Main causes



Personal factors: not complying with the established safety rules, not using the self-inflating life jacket or not assessing the conditions of waves, wind... regarding the vessel's safety.



Work organisation: lack of required training or qualifications, inadequate working methods or crew tiredness.



Emergency management: lack of familiarity with emergency arrangements and procedures.

Recommendations

Ensure the **ship's stability** (especially when hoisting), quantity of cargo and its stowage.

In the event of **adverse weather**: close doors, hatches and ports and remove water from bilges; secure the cargo and deck equipment.

Keep the **deck clear** and make sure that the drainage ports are not blocked.

In the event of fire, raise the alarm immediately. Use available fire-fighting equipment.

Keep risk areas (galley, storeroom...) and cabins (no smoking) **tidy and clean**. Keep a fire blanket next to the galley.

Participate in regular fire-fighting and emergency drills.

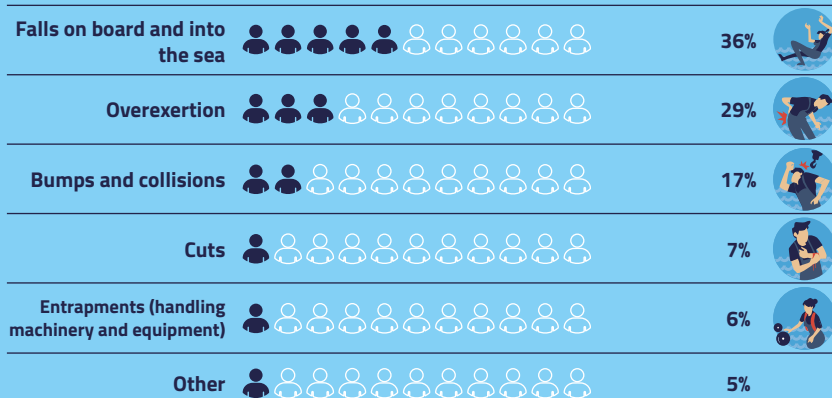
Comply with the Convention on International Regulations for Preventing Collisions (COLREGs).

OCCUPATIONAL ACCIDENTS

Hazards involved in fishing activities

They occur during the stay or the performance of a task while on board the vessel.

The most frequent accidents which occur in the fishing activity are:



Source: work accident reports (MITES 2010-2020).

Falling is not funny!

Falls on board and into the sea

On a vessel, falls are frequent both on deck and when embarking and disembarking.

The “man overboard” is a special form of fall, which occurs when falling into the sea.

Always wear a self-inflating life jacket on deck and, if necessary, PPE against falling from height.

- Keep the **deck and working areas as well as the passageways** clear of obstacles and debris. Remove deck irregularities or mark them with vivid paint.



- Use **ramps, gangways or ladders** to get on and off the ship, or to pass between boats tied alongside.
- Wear protective footwear with **non-slip soles**.
- Avoid working on deck in the event of **adverse weather conditions**.
- Exercise extreme caution** in tasks where there is a risk of falling into the sea.
- Do not climb** or move around on the bulwark.

Watch your head!

Bumps or collisions

- Watch out for **obstacles** at head height.
- Protect edges and protrusions.** Secure doors, gates and hatches. Wear a protective cap to protect against bumps and knocks.
- Keep order** and stow catches to prevent them from moving.



Watch your back!

Overexertion

- You can damage your back by **handling weights, frequent repetitive movements** and by adopting inappropriate postures for long periods of time.
- Maintain a **stable posture**, hold the load as close to your body as possible, avoid twisting your back and use aids whenever possible.
- If possible, use **tables for sorting** and gutting fish and use knee rests if necessary.



Watch your hands! *Cuts*

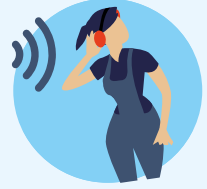
- > You can cut your hands when **using knives and with the bones and fins** of some species. Cold weather increases the risk of cuts.



- > Keep **knives sharp and clean**. Cut in an outward direction from the body. Always wear protective gloves.

What are you saying! *Noise*

- > High noise levels **make communication difficult** and increase the risk of accidents and can lead to deafness.
- > Wear **hearing protection** when necessary.



Hot, cold, UV radiation! *Environmental conditions*

Environmental conditions

- > When it is hot, **drink plenty of water** and take breaks in the shade.
- > **Wear suitable clothing** against wind, cold or water. Protect especially ears, hands and feet. Drink warm beverages but **avoid caffeine and alcohol**.



- > The sun damages the eyes and skin. **Cover your head and body** with work clothes and wear sunscreen and sunglasses.

Don't burn yourself! *Contact with temperature*

Contact with temperature

- > Some equipment can reach very high temperatures. Wear **suitable protective equipment** during maintenance work.
- > Beware of **splashes of hot fluids** (e.g. cylinder purging).
- > Cold burns can also occur.



You can't see it, but you can feel it! *Contact with electrical voltage*

Contact with electrical voltage

- > **Do not use defective cables**, damaged plugs or sockets. Do not pull on cables when disconnecting electrical equipment.
- > Do not use electrical equipment with **wet hands**.



Don't get sick! *Chemical and biological hazards*

- > **Chemicals** used for cleaning, maintenance of the vessel or preservation of catches can be dangerous.
- > **Follow label recommendations** and keep them covered and labelled in their original containers and do not mix them. Wear protective equipment (gloves, goggles, etc.).
- > Be careful with confined spaces such as the ship's hold. They can accumulate toxic or flammable contaminants or lack oxygen. Follow safety procedures.
- > You can also suffer skin injuries from infections, allergies, **bites and stings** from marine species.
- > Identify **hazardous species** and wear appropriate gloves during handling. Wash with soap and hot water at the end of each shift.



SPECIFIC OPERATIONAL RISKS

in small-scale fisheries



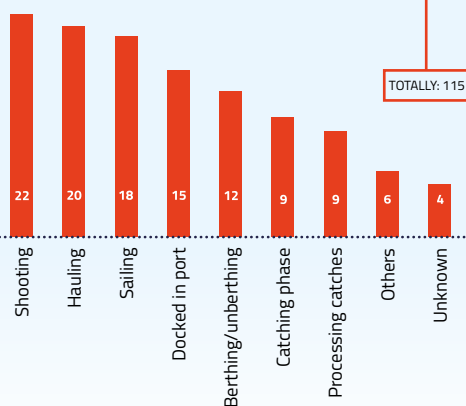
When do serious accidents occur?

40% of these accidents usually occur during one of the fishing manoeuvres, mainly when **shooting, catching and hauling the fishing gear**.

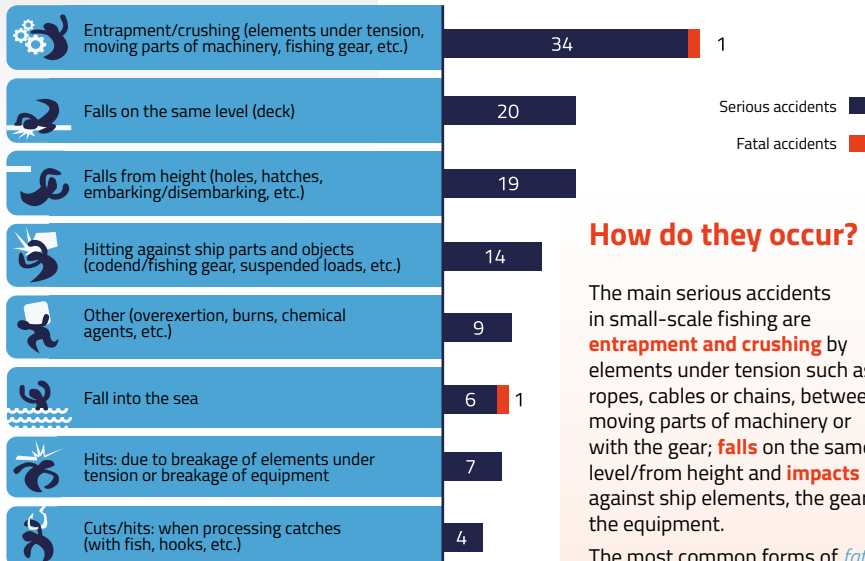
Accidents in the port, during berthing/unberthing or with the vessel docked, account for 24% of accidents.

They are **less frequent** in other phases such as navigation, catch processing and on-board maintenance.

SMALL-SCALE FISHERIES: Activity phase



SMALL-SCALE FISHERIES: Forms of serious and fatal accidents (2011-2020)



TOTAL: 113/2

Source: accidents under investigation by the ITSS (2011-2020).

How do they occur?

The main serious accidents in small-scale fishing are **entrapment and crushing** by elements under tension such as ropes, cables or chains, between moving parts of machinery or with the gear; **falls** on the same level/from height and **impacts** against ship elements, the gear or the equipment.

The most common forms of **fatal** accidents are falls overboard and entrapment with elements under tension.

GILLNETS, TRAPS AND POTS



Small-scale fisheries, also known as artisanal fisheries, comprise all non-industrial fishing gear and equipment.



It is carried out with small vessels, which favours pitching and rolling. In addition, they have small decks, where the nets and gear are placed, which are damp and have remains of the catch.

Vessels are often old and sometimes in poor safety conditions, increasing the risk of accidents.



Many serious accidents are caused by **falls on the same level**, due to slips, trips or loss of balance caused by the lack of space and the rolling of the vessel.

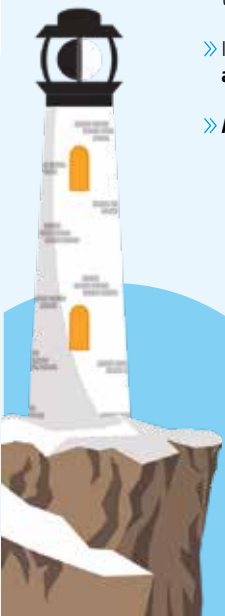
Falls from height through hatches, openings or ladders are also frequent. As they are small vessels, in many cases they do not have access elements such as gangways, making it easier for falls to occur during embarking and disembarking.

- » **Keep the vessel tidy and clean.**
- » When stowing the pots, make sure that you **do not obstruct the view from the navigation bridge** or access to rescue equipment.
- » Use the **safe means of embarking/disembarking** which are available.
- » **Store gear** in suitable crates or containers in such a way that it can be removed slowly, following a natural sequence, without getting stuck and with as little crew intervention as possible.
- » **Be careful when standing on nets** while stowing, especially in rough seas. Stay in the side corridor, if available, and do not access the inside of the crates.



Entrapment with elements under tension and between moving parts of work equipment is a common form of serious accidents, both when shooting the gear and when hauling.

- » **Keep a safe distance** from the gear during shooting.
- » **Avoid stepping into the crates** to clear snags/ tangles in the gear during shooting.
- » **Stay away from the ropes** which are behind and close to the legs.
- » Pay special attention when **separating the gillnets**.
- » **Avoid entanglement** with the net or rope during hauling and entanglement of hands or with clothing in the net hauler by wearing tight-fitting clothing with cuffs or sleeves.
- » **Do not wear rings, chains, etc.** which can become entangled and wear properly sized gloves.
- » **Avoid stepping on the gear** which is being shot.
- » Keep a knife at hand **to cut the gear** in case it gets snagged.
- » **Use machines** with as little crew intervention as possible, such as rolling net haulers.
- » Controls for the machinery should be accessible from operator position and an emergency stop device should be located within reach.
- » **When passing the rope** over the winch drum and putting it into operation, do so slowly without standing on the winch when it is rotating.
- » **Adjust haulers** and line haulers to a turning position which allows them to stop quickly in the event of entanglement.
- » **Release the entangled fish** before it passes through the net hauler by stopping it.
- » When hauling, **keep a constant eye on the gear**. If it becomes snagged, it is preferable to lose it than to destabilise the boat.
- » In case of crossings with gears of other vessels during hauling, **take precautions to avoid entanglement with your own**.
- » **Avoid large piles of nets** close to the person operating the hauler.





Falling into the sea during operations is a frequent form of accident and often leads to death. There is a risk of the vessel capsizing when retrieving pots or nets due to gear entanglement.

- » **Be extremely cautious** when shooting and hauling the gear as you may be pulled into the sea.
- » **Avoid falling into the water** when retrieving the headrope buoy with the boat hook or when trying to release the net from a snag. If necessary, ask a crewmate for help.
- » **Always wear a self-inflating lifejacket** when working on deck and, if necessary, a restraint system to prevent falls from height.



Another frequent cause of accidents is **collisions with parts of the ship** or other objects.

- » **Be careful when retrieving the buoy with the boat hook.** If there is another crew member using the boat hook, do not pass behind it as they may hit you.
- » Store the **boat hook** in a sheltered area and out of the way.



During the journey to the fishing grounds, the gear is being prepared and there is a risk of **bumps and cuts** when baiting the traps, or **injuries** when baiting the hooks. There is also a risk of bumps and cuts when handling catches.

- » When untying and clearing the net, **wear suitable protective gloves** to avoid cuts and bites.
- » **Be careful when using the mallet** to remove certain organisms from the net. It can cause bruising of limbs.
- » **Check pots** before removing catches.
- » **If the gear is very dirty**, it is recommended to clean it after arriving in port.



Take a break!

Watch out for fatigue

Fatigue can increase navigation errors, sea accidents and the risk of being injured due to operational accidents. Fatigue can be caused by long working hours, night shifts and high physical strain.

- » If possible, **get at least 6 hours of uninterrupted sleep** and **take breaks of about 20 minutes** during the day to ease tiredness.
- » **Follow a healthy diet** and drink enough water to stay well hydrated. Stay fit.
- » **Some medications, alcohol, tobacco** and other substances can affect alertness/performance as well as cause insomnia or drowsiness.



Duties and responsibilities

Shipowner

Ensure the effective protection of the crew.

TAKE measures to ensure that ships are operated without endangering the safety and health of the crew.

PROVIDE the necessary means to ensure safety on board.



Skipper or captain

Ensure safety and health on board.

FOLLOW the orders or instructions of the shipowner.

SUPERVISE tasks, assigning them only to trained personnel.

ENSURE the correct condition and location of safety, emergency and protective equipment, as well as notices, instructions and ship's plans.

ENSURE that the crew receives training and information on occupational risk prevention and that emergency drills are carried out.



Crew

For your safety and everyone else's.

RESPECT the safety measures adopted.

FOLLOW the safety instructions received.

USE the means and protective equipment provided correctly.

REPORT immediately any situation that, in your opinion, involves a risk to safety and health.



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