



ECOS safety instructions for sailing in small vessels

These instructions are applicable to staff, students, interns, guests etc. at the Department of Ecoscience (ECOS). The instructions apply to the following boats:

Niisa, based in Roskilde 	AM Hanne, based in Roskilde 
Onkel Bo, based in Roskilde 	MARina, based in Jylland 

Read more about the boats here:

Silkeborg: <https://ecos.medarbejdere.au.dk/en/employee-handbook/b/baade>

Roskilde: <https://ecos.medarbejdere.au.dk/en/employee-handbook/b/boats-in-roskilde>

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1. General rules

The highest authority/shipowner of the above vessels is always the department head of RKS, see organisational chart: <https://ecos.medarbejdere.au.dk/en/organisation>

If sailing in similar vessels that are not owned by ECOS, follow the safety rules of the shipowner. However, these must at minimum correspond to ECOS's existing rules.

Read and follow these instructions and see the relevant regulations in item 7. **References**

Sailing activity is applicable when operating in inner Danish waters and coastal and estuarine sailing in Denmark using the abovementioned vessels. The purpose of sailing is to transport researchers, students and passengers who will carry out studies of aquatic environments, fish and marine mammals, as well as collect biological data for research.

When operating small boats, we refer to other instructions.

2. Responsible boatman and necessary certificates of competence

A responsible boatman is always appointed for the trip. The crew must be adjusted based on a risk assessment that takes into account that navigation and can be carried out safely and securely (see item 3).

The following are qualification requirements for vessels under dimension number 20, engine < 100 KW:

Certificate	Shipmaster	Other persons on board	Comments
My certificate of competence in sailing	✓		Can be replaced by other approved sailing licenses, e.g. a powerboat license with proof of having passed the test and demonstration of the use of the vessel. The test must be witnessed by a technically qualified person employed by AU.
The maritime safety course	✓		
ROC or min. SRC	✓		Restricted Operation Certificate (ROC) = Fixed VHF in the boat for use in A1 sea area. Short Range Certificate (SRC) = Handheld VHF for use in the coastal areas, lakes and streams.
First aid course	✓	✓	In addition to the shipmaster, at least one passenger must have an approved and valid first aid certificate
Completed the safety induction	✓	✓	Requirements for persons aboard the vessel as passengers who have no direct job function on board are that they must be able to swim and must have completed a safety instruction/workplace assessment conducted by the boatman prior to departure.

3. Prior to sailing/identification of risks (workplace assessment)

Assess the weather YET AGAIN. Use DMI's website (www.dmi.dk) or the defence's Centre for Operating Oceanografis website (<https://www.fmi.dk/fcoo>). The boatman is responsible for making the decision as to whether it is safe to be on the water that day.

The boatman must as a minimum requirement inform an "backup" of:

- The number of persons on board and who they are
- The area in which you are planning to sail
- Planned time frame for sailing

It is optional, who the backup person is. It can be a colleague or a family member. The most important thing is that someone knows you are out on the water and can respond appropriately.

Upon completing sailing, inform the backup that the boat and crew have returned safely, indicating the time.

A risk assessment must be made prior to commencing work, unless a previous workplace assessment can be used, as these risk assessments are largely generic. [Find the template to be filled and printed here \(Templates\).](#)

When planning new/changed projects that involve sailing, it must be reviewed whether additional safety equipment is required other than normally present on the boat, so that work can be carried out in a safe and secure manner. Find a guide for risk assessment here:

<https://medarbejdere.au.dk/administration/hr/arbejdsmiljoe/fysiskarbejdsmiljoe/risikovurdering/>

The project must not commence until the safety equipment corresponds to the requirements. Equipment is maintained and replaced continuously, and the person in charge for this always is indicated on the boats' website (link at the top of this instruction).

Sailing the boats and diving from them must never be carried out when you are alone. You must be in contact with colleagues either in the boat or on shore, who are able to react e.g. in the event that you do not return from diving.

Other risks to always consider and decide how you want to react to every time you go sailing:

- Capsizing, flooding (sailing in rough weather) - cancel if you are uncertain as to whether it is a good idea
- Cold and hyperthermia (water and air)
- Sunstroke
- Falling overboard
- Running aground and collision
- Fire (avoid smoking in the vicinity of flammable liquids)
- Unexpected change in the weather with strong wind and sea as well as reduced visibility
- Engine failure
- Risks of staying on deck while working with equipment and tools

4. While sailing/important precautions along the way

In the event of an emergency, the boatman must summon assistance from nearby vessels and land as soon as possible. Furthermore, the shipmaster must ensure that the situation does not escalate and that there is only limited damage to human life, property and the environment.

Note whether there are any discrepancies with the weather and the boat, for example too much water in the boat or reduced visibility and react in time. If the weather gets too rough or the wind turns in an unfavourable direction, turn around if necessary. Seek shelter/return to port or change your course.

Keep an eye out for each other:

- There is a risk of hyperthermia (at sea temperatures below + 10°C. wear approved and certified immersion suit*), so dress warmly and have thermal protection ready for use
- The Sun can be too harsh/sunstroke (use sunscreen, wear sunglasses and a hat with a brim, drink plenty of liquids)
- Always use the available life jackets and use the safety line, if the weather is rough. Occasionally practice rescuing a person who has fallen overboard (not required for every sailing).

* Users are responsible for checking their own life jacket (tightness and visually) at least once a year before use. The boat supervisor checks loaned life jackets regularly and also at least once a year.

Plan out your sailing trip so that grounding and collision are avoided, prepare a sailing plan, use the nautical charts, GPS and sonar. Pay special attention to other traffic, driftage and set the current.

Pay extra attention in poor visibility, follow the buoys and traffic segregation and adjust speed according to the situation. Only sail in the dark in open waters or in clear landfall.

In case of a shipwreck or fire, it is too late to read these instructions, but as all crewmembers must read these instructions prior to sailing the first time, general points are listed here:

- In case of a shipwreck, contact other vessels and land for assistance (use VHF channel 16-DSC ch 70), use pyrotechnics, if possible use a life raft and leave the vessel.
- In case of fire, change direction, if possible, so that the oxygen supply to the fire is minimised, use the portable fire extinguisher or fire blanket and prevent water reaching electrical installations.
- In case of fire in the engine compartment, use permanently installed fire-extinguishing systems.
- In case of fire, secure the flammable liquids against the risk of catching fire if possible.
- In case of sudden reduced visibility, particular caution must be taken in relation to other vessels' fog signals. Sound the fog signal
- In case of engine failure, anchor the vessel and summon assistance (VHF DSC), prepare for possible towing assistance

5. Bring safety equipment

Examples of safety equipment for both named and small boats:

1. life raft (only the named boats)
2. PLB, always carried by the boatman while sailing
3. anchor
4. compass
5. flashlight
6. tool kit
7. fire extinguisher
8. first-aid kit and, if necessary, other first-aid equipment
9. necessary spare parts (e.g. extra propeller)
10. fuel reserves
11. a bailer, bilge pump and/or manual pump
12. a box with flares
13. immersion suit (flotation suit) or life jacket
14. communication devices (mobile and VHF)
15. navigation equipment (GPS)
16. a large packed lunch and beverages
17. change of clothes

6. Diving

When working under water, a distinction is made between snorkelling and diving. The term diving usually involves scuba diving. This means diving with apparatus and a tank.

Diving in connection with work for ECOS must follow the rules for performing the work and for diving equipment, as laid down in relevant laws and regulations. Therefore, diving with breathing equipment may only be carried out by persons with a valid a professional diver's certificate. The assistant diver must be trained as well.

For further information, contact Teis Boderskov/Annette Bruhn in Silkeborg or Jeppe Dalgaard Balle/Lars Renvald in Roskilde.

7. References

These safety instructions have been prepared based on the following executive orders issued by [the Danish Maritime Authority](#):

- [Executive Order No. 956 of 26/09/2012](#) -Executive order on small vessels carrying up to 12 passengers.
- [Executive Order No. 233 of 05/03/2015](#) -Executive order on determining crew for small commercial vessels and fishing vessels in Greenland that carry up to 12 passengers on domestic voyages in Denmark and along Greenland's coasts.
- [Executive Order No. 999 of 12/08/2013](#) -Executive order on medical examination of seafarers and fishermen.
- [Executive Order No. 676 of 21/05/2015](#) -Executive order on seafarers' period of rest.