

Safety manual for field work



General rules

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Introduction

The purpose of this field guideline for employees and persons affiliated with the Department of Ecoscience, Aarhus University, is to:

- Ensure the necessary theoretical background to be able to work safely in the field
- Ensure common high standards for safety related activities during field work regardless of the location
- Increase the general awareness of safety during field work

in order to prevent accidents to the greatest extent possible.

This manual has been prepared with the objective to gather relevant knowledge relating to safety aspects of field work in one place and make it available to everybody. This general manual is applicable for field work in both the Arctic, in the tropics and in temperate areas, and you should familiarise yourself with its contents **before** departure.

Although updated at regular intervals, this manual is a static document and you may encounter links in the text that no longer work. If so, we recommend you to Google the search terms instead.

Familiarise yourself with the rules

If you are to conduct fieldwork in another country than Denmark, it is important that you familiarise yourself with any special rules for the country in question. If necessary, search via the keywords 'working environment' and 'country'.

Communication and call for assistance

Field workers must be equipped with sufficient communication equipment. Depending on where you are, there may be variations in which communication equipment works best.

Hav mobiltelefonen med og tænk i et vandtæt etui, hvis der er risiko for, at den kommer i vandet. Check whether there is mobile coverage; if not, you will need to take other precautions.

When working in the field in areas without mobile coverage, you must, as a minimum, be equipped with an iridium telephone. In isolated areas, for example in parts of Greenland, the iridium telephone should always be supplemented with a Personal Locator Beacon (PLB) or a Spot SATellite Messenger. For local communication, for instance between various field workers within a limited area, a VHF radio for internal communication is a good safety measure. In connection with field work, the field supervisor must assess whether it is necessary to set pre-determined times for reporting to a main base or a contact person who is not participating in the field work. As a rule, field workers must report back to main base or a contact person at regular pre-determined intervals at least once a day. In connection with these check-ins, the field worker must let them know if there is a change in plans.

When working and travelling in remote areas you should always be at least two persons (both not necessarily from ECOS) – irrespective of the size of the project – unless you bring suitable ICT-equipment and otherwise stay in an area in which there is sufficient coverage.

In connection with particularly risky work, you **must** be two persons, and you must be more than two persons in connection with work where more people are needed in order to carry out the work in a safe and responsible manner. By way of example, in addition to the diver, the diver law requires an assistant diver and a handy-man – that is at least three persons. Examples of particularly hazardous work are diving, sailing a dinghy or inflatable rubber boat, driving a snowmobile in remote areas, climbing bird cliffs etc.

Responsibilities and obligations (workplace assessments)

Before commencement of the work, the project manager is responsible for preparing a plan for the field work (risk assessments are made concurrently with the preparation of the work plan (workplace assessments) to ensure that all field workers know how to work on the project in a responsible manner complying with the working environment rules). The project manager/supervisor (here also PhDs) is also responsible for his/her students' safety.

If the project manager is not present as the person responsible for the safety, he/she will appoint a person, a so-called field operations leader, as safety responsible.

In connection with fieldwork in Denmark a general risk assessment (workplace assessment) may be made for, for example, a test field.

It is the responsibility of the project manager to ensure that the safety equipment for the fieldwork has been checked and is in working order before the work commences. Even in connection with short-term field trips, the field workers must bring a minimum of necessary spare parts and tools for simple repairs and daily maintenance of, for instance, field equipment and means of transport unless smaller items can easily be procured (if the field work takes place close to a town).

The task of checking equipment **may** be transferred to the field worker who should then report to the project manager whether everything is in working order and has been checked. Field workers **must**, where required, use suitable safety equipment in connection with fieldwork.

Det indskærpes, at alle personer der deltager i feltmæssige aktiviteter, har et medansvar for, at arbejdet udføres på en sikkerhedsmæssig forsvarlig måde. Påtal det, hvis sikkerhedsregler og sikkerhedsforhold tilsidesættes, herunder også fejl eller mangler på udstyr. Læs evt. de generelle regler for ansvar på Arbejdstilsynets side:

<https://at.dk/arbejdsmiljoearbejdet/arbejdsmiljoearbejde-i-virksomheder/arbejdsmiljoerepraesentant/roller-og-ansvar/>

At research stations the logistics manager acts as field operations leader of the activities within the station's area, whereas the relevant project managers are responsible for the safety during the fieldwork.

Illness, prevention and first aid

Prior to the fieldwork, information must be sought on the risks of infection with illness during the work. Find more information on frequently occurring infectious illnesses abroad at this link:

<https://um.dk/rejse-og-ophold/rejse-til-udlandet>

In connection with field work in rivers, lakes and wetlands, there is a risk of waterborne illnesses (parasites). You should therefore always wear gloves during the field work.

Depending on which country you travel to certain vaccinations are recommended/required. It is recommended to check which vaccinations you need at [Vaccineportalen](#).

As a minimum, field workers should have a current tetanus vaccination. The bacteria causing tetanus are not found in all parts of the world, but to avoid tetanus during work because of infection with this bacterium, field workers should be vaccinated against tetanus.

The project manager must ensure that there is an appropriate emergency kit/box for the situation available to all field workers so that you may treat minor injuries yourself. The project manager must also consider whether extra first aid equipment should be supplied, to be used for more serious accidents. It is recommended, for example, that you bring your own personal medicine box containing for instance antibiotics for self-treatment of travel diarrhea in countries where it may be relevant.

At minimum, you must have passed a valid cardiopulmonary resuscitation (CPR) – 4 hours first aide course when in conditions where emergency services cannot be expected to arrive within normal response time – or the field work itself poses a greater risk.

For example, if you are working from a boat or in a remote corner of the world/Denmark or are on a plane. The Head of Department of Deputy Head of Department can clarify any questions of doubt.

Particularly on wood ticks

In temperate areas, you should be aware of the presence of wood ticks, which may give borreliose or TBE, both of which may cause meningitis in severe cases. What is most important is to prevent bites by wearing adequately covering clothes and to check your whole body after field work.

So far, TBE has mostly been seen on the island of Bornholm and in northern Scandinavia, but you may be vaccinated for TBE (please note that it must take place over a longer period prior to departure, after which it is valid for a period of 3 years).

Particularly on avian influenza

Avian influenza and risk of infection are described in a separate manual. See the working environment homepage.

Further information on risks of illness

In one of the following clinics, you can obtain vaccination advice and suggestions for useful items in your personal medicine box. The clinic performs all vaccinations and prints out prescriptions for medicine.

Rejsemedicinsk Klinik
Banegårdspladsen 18
8000 Aarhus C
Tlf. 86 12 20 85

Medicinsk Speciallægeklinik
Ringgadecentret
Jens Baggesens Vej 90 B
8200 Aarhus N
Tlf. 86 75 29 09
www.mslk.dk

Statens Serum Institut
Artillerivej 5
2300 København S
Tlf. 32 68 32 68
serum@ssi.dk
<https://www.ssi.dk/Vaccination/Rejsevaccinationer.aspx>

Notifying of accidents/emergencies

ECOS must be notified immediately in the in case of accidents or personal injury and in case of illness that requires treatment.

The contact person is:

- the deputy head of department
- *or* the daily occupational health and safety manager at the workplace.

In the case of accidents, injuries or illness, you can also contact SikkerhedsPartner directly at +45 70 113 113 (customer number SP-89421111). Afterwards, ECOS must be notified.

A decision must be made as to:

- whether it is necessary to evacuate (and if so, how to initiate the procedure)
- whether it is necessary to report a work-related accident, including notifying the daily occupational health and safety manager and your immediate superior of this).
- whether it is necessary to involve the insurance company (and, if so, contact it)
- whether home transport is necessary
- whether counselling is necessary

Read more about trauma counselling at:

<https://medarbejdere.au.dk/administration/bygninger/beredskab/>

When traveling abroad you must prior to departure hand in a list to your immediate superior, who will stay in Denmark, a list of the persons you wish to be informed in case of illness or accident.

Insurance

ECOS is covered by the Danish State's self-insurance scheme, which covers all risks normally covered by insurance, including the rules in the Act on Industrial Insurance.

The travel insurance is part of the Danish State's self-insurance scheme and applies to travels abroad. **But remember an insurance card if you are travelling abroad!**

Important: Please note that if you are on holiday in connection with the solving of duties in other countries, other insurance rules apply. You must contact your private insurance company prior to departure and explain the situation. At our working environment homepage all applicable rules are available via relevant links to insurance and work-related injuries. [Check these prior to departure.](#)

Transport of hazardous goods

Hazardous goods are chemicals, gases, dry ice, devices with radioactive sources and open radioactive sources (isotopes).

Aarhus University's safety consultant regarding carriage of dangerous goods by air, sea or car is:

<https://medarbejdere.au.dk/en/administration/hr/workingenvironment/physical-work-environment/chemistry-and-biology/safety-adviser-function/>

It is important to be aware that some of the materials used in connection with field work will be hazardous goods when transported to and from Greenland. You may obtain the necessary papers for transport of hazardous goods with Aarhus University's safety consultants. In many different situations we need substances or materials that are natural parts of our daily life, but which require extra attention in the case of transport.

When dangerous goods need to be transported, the rules depend on the means of transport. If by road, the ADR Convention applies, if by ship the IMDG rules apply and if by plane the IATA rules must be followed.

If you are in doubt as to whether an item belongs to the category hazardous goods, you should also contact the safety consultant.

Specialized fieldwork

Activities in and along a stream

The depth of a stream may change quickly. Never enter a stream if you are alone and unfamiliar with the prevailing conditions.

At large depths, strong current and/or uneven bottom conditions a lifeline must be used.

Activity on ice

The ice must be minimum 10-15 cm thick before it is safe to walk on, but its thickness must be checked at regular intervals on the way by cutting holes. Use spiked shoes that grip the ice while cutting the hole or in case of strong wind. Never walk on thin ice or if you have the slightest concern. Safety on ice can be increased by dragging the boat with you over the ice to jump into if conditions become too risky.

Always use lifelines tied to the boat or to your colleagues.

Read about sailing via links under the [Fieldwork](#) headline.

Diving

Diving with respiratory equipment must only be undertaken by persons holding a certificate as professional diver. The law applies to use at Danish territory, the Danish continental shelf and when diving from Danish boats. The assistant diver should also hold a certificate. Consequently, it includes all normal ECOS tasks. The rules are described in more detail via this link under the headline [Guide for working at sea.](#)

Electro-fishing

Electro-fishing must only be conducted by persons holding an electro-fishing permission. See the rules in more detail via this link under the headline [Small boat and electro-fishing guide.](#)

Working in heights/masts

When working on a mast etc. in order to install or service equipment, you are required to complete a fall protection training course and use equipment and protection approved for climbing and possibly rescuing colleagues, who are unable to get down by themselves.

The work must be performed by 2-3 people (3 people when above 60 m) and must be planned in accordance with applicable regulations.

Everyone directly involved in the task must be trained and up to date re. rescue from heights and first aid.

Arctic or tropics?

If you are undertaking fieldwork in the Arctic regions or in the tropics, or are you going to work with drones, supplementary manuals are available.

Working on a boat eller fra fly

Likewise, if working on a boat or ship, eller skal du på fx tælling fra fly, supplementary specialized manuals have been prepared. Find them at [the working environment homepage](#).

Udstyr til brug for dyrefangst

Ved anvendelse af diverse teknisk udstyr (fælder til dyrefangst, kanon-net, bedøvelsesvåben etc.) indskærpes det de deltagende personer at udvise fornuftig og sikkerhedsmæssigt forsvarlig omgang med det anvendte udstyr. Anvendes der kemikalier o.l. (medicin, gift, krudt, flydende brint, radioaktive stoffer etc.), skal arbejdet udføres i henhold til de sikkerhedsprocedurer, der er udarbejdet for de enkelte stoffer. Det indskærpes, at national og international lovgivning vedr. anvendelse og opbevaring af teknisk udstyr og medicin/kemikalier skal overholdes. Transport af farligt gods behandles i tidligere afsnit.

Brug af våben i Danmark foregår i begrænset omfang, benyttes kun af personer med gyldigt jagttegn og kun efter forudgående aftale med Viceinstituttlederen. Den fungerende våbenansvarlige er Lars Haugaard.

Andet udstyr

Brug af le forekommer og kræver stor opmærksomhed. Leen skal have beskyttelseskappe på under transporten. Bær ikke andet sammen med leen.