VU VRIJE UNIVERSITEIT AMSTERDAM | FACULTEIT DER BÈTAWETENSCHAPPEN

Regulations Safety around Fieldwork

1. Introduction

Fieldwork and field trips are essential components of the Earth Science, Earth, Economics and Sustainability and Biology (ecology) courses. Lectures, practicals and textbooks can never replace earth science or biological reality and cannot reflect the great complexity and diversity. Field trips and fieldwork have an important function within the courses:

- Earth sciences. The various field trips and field works are needed to teach students to think about the complexity in four dimensions of our planet, to experience what rocks, fossils and minerals look like in real life, to learn to recognise the formation processes of a wide range of geological structures, environments and landscape forms, to make observations that can be used to construct geological and geomorphological maps, and to integrate the many field data into a geological-geographical history of a given area. During field trips and field works, people also learn to handle a number of earth science instruments, from compass to geophysical borehole monitors.
- Earth Economics and Sustainability. The fieldwork and field trips aim to give students an understanding of Earth Science research to describe the properties and spatial propagation of geological packages three-dimensionally in geological cross-sections. For this purpose, (deep) hand-drilling is done and students learn how to handle hammers and basic hydrological fieldwork equipment. The insights are given a place in interdisciplinary and applied earth science research into mineral extraction possibilities, drinking water extraction and (ground)water management. To this end, during fieldwork in Limburg and Salzburg, security or guide students visit quarries that are not normally open to the public.
- Biology. The various field trips and field works aim to introduce students to the diversity of forms of a wide range of organisms in different ecosystems, to gain an understanding of the relationships between organisms and between organisms and their habitats. Field trips and fieldworks also teach students to deal with a range of research methods, which are necessary to establish biodiversity and to investigate inter-species and ecosystem relationships.

Fieldwork and excursions, especially for the Earth Sciences and Earth, Economics and Sustainability programmes, are an essential part of the programme: a significant part of the study period is spent in the field. This specific study condition, with which prospective students have no experience whatsoever, requires special attention to safety when working in nature, off the beaten track.

This memorandum contains regulations to regulate safety for participants in field trips and fieldwork and to define the responsibilities of faculty administration, faculty organisation (education directorate, director of business operations), lecturers and students. This is without prejudice to the individual responsibility of students and supervisors for their own safety and health and that of others during fieldwork. This individual responsibility is not limited to activities in the field, directly related to the excursion or the execution of fieldwork assignments, but also includes the behaviour and all actions of the participants during the period in which the fieldwork or excursion takes place. In fact, this individual responsibility always exists.

2. Responsibilities

2.1 Faculty board/director of business operations

The faculty board is responsible for establishing regulations regarding safety during the conduct of fieldwork and field trips and for general compliance with the regulations. The faculty board is responsible for all measures, which enable the implementation of the safety regulations. Departments shall provide the material and personal protective equipment necessary for the implementation of safety regulations. This includes resources for first aid training, helmets and, if necessary, drivers. The faculty also ensures adequate insurance for participants. Material resources, which can reasonably be considered part of the standard personnel equipment for fieldwork (mountain boots, rain gear, sunscreen, etc.) are at the expense of the excursion participants.

2.2 Programme director (with deployment of the education office)
The programme director notifies department heads and individual lecturers (including PhD students etc.) and students (study guide and VU.nl) of the regulations. He/she ensures that the main lecturer in charge brings a memorandum "risk inventory and evaluation and safe working methods" (see Appendix 1) to the attention of participants in fieldwork and excursions in advance. This is prepared for each specific field activity by the lead lecturer. Afterwards, as part of quality assurance, the programme director checks with students and lecturers whether safety problems have occurred during fieldwork and excursions, and which ones.

2.3 Training coordinator
Students receive education on safety during field trips and fieldwork in the first year of their programme. General rules on safety (clothing, rules of conduct in the field) are covered prior to the first field activity in the programme. More specific issues (e.g. organisation, fieldwork safety) may be emphasised prior to the first summer fieldwork. This education is included in the study timetable.

2.4 Lead lecturer
The lecturer in charge of a field trip or fieldwork will ensure the preparation of a "risk inventory and evaluation and safe working methods" note for the activity concerned.
This memorandum must in any case follow the guidelines set by the faculty (see also 3.1). The main lecturer responsible must bring the memorandum to the attention of students and other lecturers concerned in advance and ensure that the other lecturers and students act in accordance with the safety regulations. He/she also explicitly addresses junior staff in this regard. Prior to the excursion or fieldwork, the main responsible lecturer ensures that each student is registered for the component and has received the risk assessment and signed for receipt.
Students register in My Dashboard>Study/Internship abroad> Register internship/free mover abroad. The main lecturer responsible will receive an e-mail when the student has registered so that he/she is informed. In this mail, attention is drawn to the foreign affairs travel advisories.

2.5 Lecturers and tutors
Supervisors of (groups of) students should explicitly act in accordance with the safety regulations during fieldwork and excursions and thus set an example for participating students. They follow the instructions of the lecturer in charge and - if necessary - provide students with additional safety guidelines and advice. They also ensure that students act in accordance with the safety regulations. Students must always follow the instructions of VU staff. If a student fails to do so and this leads to increased risks, an employee can (and must) take immediate disciplinary measures.
Worrying behaviour of colleagues is reported to the colleague's manager. A manager has the authority to give instructions.

2.6 Students
Students receive instruction and clear guidelines on behaviour so that they do not take unnecessary or irresponsible risks. When they do, any damage they cause in the process, both to themselves and to third parties, is primarily at their own expense and risk. This applies both to activities related to their studies and those in leisure time.

The possible obligations with regard to supervising students is partly determined by the above. Students primarily bear their own responsibility; as their expertise and experience regarding the specific risks of fieldwork is lacking, the obligation to supervise will increase.

2.7 All participants
Every individual participant in excursions and fieldwork (i.e. also every participating student) has the responsibility to carry out all activities during these study sections as safely as possible, not only for themselves, but also for other participants and outsiders. They should act in accordance with the faculty-established safety regulations and also follow additional safety guidelines provided 'ad hoc' by lecturers. Participants in excursions and fieldwork must report all personal details (e.g. state of health, food allergies, sensitivity to insect bites, disability) that may affect their personal safety, or that of persons in their immediate vicinity, to the main lecturer responsible in advance.

3 General faculty regulations

3.1 Risk assessment and evaluation and safe working practices.
Prior to each excursion or fieldwork, a risk inventory and evaluation is drawn up by the lecturer, who bears the main responsibility (see Annex 2). The purpose of the risk inventory and evaluation is to recognise important foreseeable risks and reduce them to an acceptable level by taking preventive measures, to prepare participants as well as possible for foreseeable risks and to make known the protocols how to act in case of possible accidents.

When drawing up this risk inventory and evaluation, use should be made of the memorandum 'Points of Attention Safety around Fieldwork' (Appendix 1), insofar as the points of attention mentioned therein apply to the fieldwork in question.

The following topics, where applicable, should be covered: responsible supervisor, mutual division of tasks of supervisors, location and nature of the area, expected weather conditions, recommended clothing and footwear, safety equipment (helmet, goggles, shoes, whistle, first-aid kit), physical fitness required, specific local health hazards, compliance with local codes of conduct, organisation of first aid (e.g. first-aid equipment, local emergency number, mobile phone), transport (drivers), contacts between participants and guides (location, phone numbers), fieldwork permits, safety regulations.

The risk assessment containing the foreseeable risks and associated preventive measures are issued (as part of the field trip or fieldwork guide) to, and discussed with, the participants in the respective field trip or fieldwork.
Copies of the risk inventory and assessment should be sent to the faculty director of business operations and the programme director.

3.2 No individual fieldwork in the first and second year of training
Individual fieldwork in the first two years of the programme is not allowed. Fieldwork in the broad sense is carried out in those years by a group of at least two students. Any desire of students to work individually will not be honoured.

3.3 International Office (IO)
When a fieldwork or excursion abroad is planned, the International Office (IO) should be informed. In the event of an emergency, the IO should be able to contact a contact person to discuss possible repatriation. More information on what to do in case of calamities abroad can be found at VU.nl: International travel policy.
Exchange students are given an info sheet - Safety awareness factsheet - which includes the number of the emergency phone and indicates to save the phone number of the local emergency services.

3.4 Fieldwork in a remote (yellow) area
Fieldwork in a remote (yellow) area requires a risk analysis and is submitted to the IO for advice. The faculty board decides.

3.5 No fieldwork in case of negative travel advice
It is stressed that educational activities in areas for which the Ministry of Foreign Affairs issues a code orange or red travel advisory are not allowed and should be cancelled. If the travel advisory for the area or country concerned changes from yellow to orange during the stay, the field trip or fieldwork should be cancelled. The travel advisories can be found via: Travel advisories | Travel | Netherlandsworldwide.nl.
The lead lecturer must consult the International Office in case of code orange. The lead lecturer sends the risk assessment of the excursion or fieldwork in question to the IO. The IO gives advice, the faculty board decides.

4 Insurance

Accident insurance for BHV
For accidents that happen to FAFS officers on the VU campus, within the Netherlands and 50 km outside it (for teaching- and research-related accidents), the VU has FAFS Accident Insurance. More information can be found on VU.nl: see Service portal staff.

Vehicles
In field works, vans are often hired. By law, the vehicle should be insured for at least third-party cover. If an accident occurs with it, the VU/faculty may be held liable as the party involved in an accident. It is advised to take out WA-Casco (all-risk) cover and in all cases to read the contract with the lessor's terms and conditions to see what is and is not covered. It is often also possible to buy off the excess.

The lessee can also take out passenger insurance with the lessor. Vehicles are excluded from VU corporate liability insurance.

Company liability insurance (WA insurance)

In general, it is stated that the faculty/VU is responsible for students and staff abroad. This means that fieldwork (provided it is a compulsory part of the study) is usually considered the responsibility of the faculty. The VU has a corporate liability insurance (also called: WA insurance) that insures employees and students of the VU. The VU has covered the most important risks with this collective insurance. Under the corporate liability policy, activities of lecturers and students engaged in scientific research and teaching as part of the study programme are covered at home and abroad. If the VU sends lecturers and students out on fieldwork, they are WA insured. The insurance is under Dutch law. This means that compensation for injuries etc. is as be settled by Dutch standards as much as possible.

Although VU staff and students are insured under their supervision, that does not mean the insurance always pays out. What is important is that people use 'common sense'. The moment they take irresponsible risks, the insurance will not pay out or will try to recover it from the individual. From that perspective, the risk assessment prepared in line with this note Safety around fieldwork is crucial. Staff and students are educated on what the specific risks are, but also what the desired behaviours are. The VU insurance expert who was asked for advice in this regard called this 'good employment practice': as an employer, you try to keep employees (and their guests - students) safe from risks.

In conclusion. In case of calamities, responsibility will usually be placed on the faculty. In case the calamity is caused by the fault of a participant of the fieldwork or excursion (e.g. due to non-compliance with regulations), the faculty will recover the costs incurred from the perpetrator.

Travel insurance

Normal travel insurance policies are not suitable for fieldwork and excursions, as they exclude fieldwork; fieldwork refers to activities with an increased risk if occurring outside the premises treading paths, water, mountain and winter sports. The VU has taken out collective business travel insurance for this purpose. Employees and students who travel on behalf of VU, including fieldwork, are insured. It covers cancellation costs, damage to luggage and extra costs in case of accident, illness or car breakdown. Regarding the excess on travel insurance: this depends on the type of damage suffered.

Only lecturers employed at VU and students registered as participants are insured. The lecturer in charge must therefore ensure that only registered participants go along on fieldwork and excursions.

Damage and liability

The corporate liability insurance in combination with the collective travel insurance taken out by the faculty provides acceptable coverage against liability. However, prevention is better than cure; moreover, it can never be ruled out that the actual damage suffered exceeds the insured limits. Reporting damage and/or holding the VU liable: Damage to personal property, on VU.nl: schade.fpc@vu.nl.

Mission regulation

VU.nl: see the Service portal staff.

5 Transport for group transport for fieldwork and excursions

a. For fieldwork and excursions, driving vans is assumed to be necessary to carry out the employer's assignments. Lecturers and student assistants are allowed to drive and are covered by third-party insurance. The condition is that the van must be on a normal way: no more occupants than seats, no alcohol consumption, etc. (see also Chapter 4 Insurance).
   Students may also act as drivers on behalf of the main lecturer in charge. Students fall under the category of 'guest of the VU employee' for insurance purposes. They are also covered by third-party insurance. Again, of course, the insurance will only pay out if they acted in a normal, common sense manner.
   With regard to student drivers, the faculty board follows the line that group transport by students is not encouraged, it is not prohibited either. However, the Board assumes that the lecturer, who is responsible for the implementation of the study component in question, only allows students to drive, who can reasonably be assumed to have sufficient driving experience. Such driving experience must be assumed to have been acquired when the student concerned has held a driving licence for at least two years. This is monitored by the head teacher.
b. Student assistants cannot be participants in the field activity at the same time in their capacity as students, unless the task as a driver involves only outward and return trips to the fieldwork/excursion area or small trips per day.

c. Drivers are obliged to provide data, which may affect their performance as driver (e.g. health), to be reported to the head lecturer.
d. If no drivers with an employment or guest relationship with the VU are available, professional drivers should be used, with the consequent possibility of a bus from a transport company.
e. In the case of fieldwork, students are allowed to use a car, driven by themselves or by another student. However, students should be given a real choice to provide for their transport by other means. This can be done by assigning students walkable or bikeable fieldwork areas, or arranging drop-off and pick-up facilities through staff-driven vans/cars. Students, who do not have a driving licence, can never be put in a position to drive a car.

Notes
In a legal sense, it is important that responsibilities can only be assigned to persons or bodies competent to do so under the law or other regulations and that burdening students with responsibilities other than their own safety can only be done in accordance with their abilities as students.

6 In conclusion

The above rules of conduct have been drafted with the utmost care. Compliance with them can make an important contribution to preventing unnecessary risks. They are a weighty guide, but are not meant to be an exhaustive vademecum for all potentially risky situations. Depending on the concrete situation, specific precautions will have to be taken. It remains primarily the individual participant's own responsibility on excursions and fieldwork to ensure that unsafe situations, not only for themselves but also for others, are avoided and accidents are prevented.
Obviously, this responsibility can also lead to its own liability.

These regulations were originally drafted in 2004 and updated in 2008, 2012, 2015 and 2021.
The current version was adopted by the Faculty of Science Faculty Board on 2 December 2022.

Annex 1

Concerns Safety around Fieldwork

1 Introduction

While many places and activities will harbour few more hazards than those one might encounter in everyday life, excursions and fieldwork always have inherent risks due to their specific nature. For example, steep cliffs, quarries, mines and construction sites, outcrops along coasts and rivers, public roads or railways, river beds, salt marshes and mud flats, high and low moorland swamps and mountainous terrain can be dangerous places. In addition, bad weather conditions can sometimes greatly increase the risks. Moreover, inexperienced, untrained and insufficiently informed participants are often unaware of the risks they face.

When carrying out fieldwork, risks should be minimised. Any risk that cannot be kept small should be avoided. This informative supplement to the policy document 'Safety around fieldwork' specifically addresses general rules of conduct and potentially risky situations.

Unsafe situations and accidents do not only occur in the field. Accidents can also occur in the activities around them. The main causes are then irresponsible behaviour in traffic and sports activities.

The purpose of this text is to help raise awareness of risky situations among both teachers and students. This appendix can also be used as a checklist from which lecturers, when preparing risk assessments, can highlight those situations that are relevant to the field unit taking place under their guidance and responsibility.

2 General rules of conduct

- Behave in an orderly and controlled manner during field trips and fieldwork.
- Respect local or licensed codes regarding dress and behaviour.
    - Bear in mind that in most countries people are not as tolerant as in the Netherlands. Your behaviour may lead to misinterpretations among the local population. Do not send signals through behaviour and clothing that could be interpreted differently than intended.
- Respect other people's property, not only in the field, but also in bus, hotel and campsite.
- Always ask permission to enter private property. Close fences and do not leave litter or rubbish behind. On fields or roads, do not leave rock fragments or open holes that could damage livestock or pose a danger to traffic or other passers-by.
- Do not leave outcrops and field locations dangerous for those coming after you.
- Observe the rules of conduct in the wild and make sure you are aware of local ordinances. Be considerate and environmentally conscious. Avoid unnecessary disturbance to living nature.

3 Be informed and provide information

- The memorandum 'Information for students and staff going abroad for fieldwork' will be handed out to participants in field trips and fieldwork: it contains all the details about collective insurance and how to contact the home front in case of emergencies. Make sure the home front can reach you: let them know where you are.

- Ensure that you are aware of the nature of the terrain and the weather conditions possible there before the start of fieldwork: only then can you make sure you have suitable clothing and footwear. This information, as well as any other facts necessary to assess the risks of the fieldwork, should be given to students by the lead teacher.
- Always take sufficient clothing, food and water with you when entering large and/or difficult-to-access areas.
- Do not enter the field without leaving a message about where you are going (possibly with a map) and the time of your return. If you engage persons in the process, do not forget to sign out on your return!
- Make sure you have a mobile phone with you in the field. Also make sure to have home address and phone number in your pocket to report a late return. If others do not sign off on time: alert supervisors and agree on who will call the local police.

4 Alcohol, smoking and drugs

- Experience shows that the highest risk of accidents is related to the use of motorised vehicles, whether combined with alcohol consumption and general nonchalance or not.
- The consumption of alcohol during field and excursion work is prohibited. Observation will result in immediate termination of fieldwork for the student concerned.
- Do not smoke in dry areas.
- Possession and use of drugs during fieldwork and excursions is prohibited. Detection will result in immediate termination of fieldwork for the student concerned.

5 Traffic

- Do not consume alcohol in traffic and avoid excessive amounts of alcohol on the night before your participation in traffic (and fieldwork).
- Drive calmly and defensively; keep your passengers and car damage-free. Make sure you return your rental car intact after a field trip.
- When driving on field roads, know when to walk.
- Inform yourself (e.g. via ANWB/Verkeer) of different traffic rules in other countries.

6 Clothing

- Even in warm areas, wear long trousers in the field, this will reduce the risk of abrasions, tick bites or worse. In warm areas, protect your head with a sun hat/cap. Use of sunscreen, with a protection factor of at least 30 and preferably 50, is essential in hot areas.
- In fieldwork areas, where a fair amount of rain can fall, it is all too easy to feel wet, cold and miserable. This not only risks exposure to hypothermia, but distracted attention also increases the risk of accidents. Therefore, always wear weather-appropriate clothing: shirt, wide-fitting trousers, warm jumper, brightly coloured waterproof anorak with hood.
- If the weather is very wet, make sure you have waterproof rain trousers too. Tight-fitting jeans are totally unsuitable in wet weather: wet jeans do not dry up and in fierce cold winds, the risk of hypothermia is quite high.
- An umbrella seems handy in rain, but is definitely not so in rough terrain: one lacks a hand to protect against falls.
- As footwear in the field, ankle-length waterproof mountain boots with rubber profile soles are the norm. Gym shoes are out of the question, one is then asking for accidents and injuries. Rubber boots are good on wet and muddy ground.

- Wear a safety helmet in all places where stones or other objects may fall: old quarries, cliffs, steep walls, rubble slopes. Wearing a helmet is mandatory when visiting working quarries, mines and construction sites.
- Wear safety glasses when hammering on rocks.
- Consult the daily weather forecast. Be wary of changes in the weather during your work. Do not hesitate to turn back if the weather deteriorates. Always bring waterproof clothing if you plan to work in the field for several hours.
- Do not go into the field during thunderstorms. If you are in the field and a thunderstorm strikes, seek shelter. Do not stand under trees or near high obstacles. In flat areas without shelter, lie down on the ground so that you are not the highest point in the landscape.

Hypothermia (hypothermia) and hyperthermia (solar or heatstroke)
Hypothermia is the result of a dangerous loss of body heat. The main cause is wind chill (wind chill) when wearing inadequate or wet clothing. The first symptoms are uncontrolled chills, pale skin colour and aggressive responses to advice and questions. This is followed by lethargy and lack of coordination. The individual himself feels hot and sleepy. The best treatment is a 40°C bath; if this is not possible: extra clothing and protection (emergency blanket). Prevention is better than cure: wear clothing suitable for the prevailing weather (taking into account a possible cover) or always take a rain jacket with you during fieldwork.

Overheating is the result of a dangerous increase in body heat. The main cause is physical activity in hot weather or high air temperature (e.g. in a deep mine, dune valley, flat landscape in windless weather). High humidity will worsen the situation as it reduces the body's ability to dissipate heat through sweating. Stop all activity, rest in the shade. Drink cold water, but in moderation to avoid stomach cramps. Sponge the victim with lukewarm water to promote cooling by evaporation. If heatstroke is at a more advanced stage: wrap the victim in a sheet and keep it wet with lukewarm water. Warn a doctor immediately. Again, prevention is better than cure. Wear clothes that protect from the sun's heat (hat, thin long trousers, thin long-sleeved shirts), drink plenty of water and eat salty food to fight dehydration. Sunscreen, preferably with a protection factor of at least 30 and preferably 50, is an essential part of fieldwork gear.

7 Health

- Maintain good physical condition. Fieldwork usually requires more effort than normal work and working days are often long.
- Before the start of excursion or fieldwork, inform the guides of any illness, allergy, physical impairment, functional disability (such as autism) or need for special medical care. If necessary, have your GP contact the guides.
- During an excursion or fieldwork, communicate any problems to the guides immediately. Tell them immediately if you do not feel well or have difficulties following the group. Never linger behind a group.
- Vaccinations are recommended for several countries, especially for fieldwork in non-Western countries. At least get vaccinated against tetanus before fieldwork. For specific vaccinations per country, you can consult the website of the National Coordination Centre for Advice to Travellers: http://www.lcr.nl/. The GGD can also advise you on this. Although the faculty strongly recommends getting vaccinations, the responsibility for this lies entirely with the student.
- Employees/Students, who go abroad for study or internship, can visit AUmcTroppen Institute or own GGD for their vaccinations.
    - Own GGD: https://www.ggdreisvaccinaties.nl/heb-ik-een-vaccinatie-nodig

  Expenses can be claimed from the VU if the travel is necessary for work/study.

  A statement from the faculty is required that you will be going abroad for your studies and there will also gain credits. This statement can be collected from the education coordinator to the expenses to be declared.
- For any other vaccinations or medication, students must bear the cost themselves.
- If in doubt about the condition of your teeth, see your dentist before starting fieldwork in remote areas.

- See a doctor on time even during fieldwork. Bring your health card and, if necessary, the 111 form. Consult your health insurer if in doubt about the correct documents.
- Always carry a small first aid kit with you in the field. Can you handle the things in that first-aid kit? What should you do in case of minor accidents, scrapes, insect bites? Take a first aid course. Take care of all wounds immediately, including small ones. In hot areas, wounds get infected quickly.
- Incidents can be reported via Report a physical incident (smile.nl) or the menu path: VU.nl/employee/calamities.

8 Ticks and insects

- Some ticks are infected with pathogens, such as lyme (Borrelia) and other microorganisms, and many mosquitoes and flies transmit pathogens. Use anti-tick agent to apply on the transition from skin to clothing to reduce the risk of tick bites. If possible, take a shower after fieldwork to rinse off any ticks and check yourself for ticks.
- In case of a tick bite: remove the tick as quickly as possible with special tick tongs (on sale at pharmacies or drugstores) or by pulling them out in one straight movement, or by using a tick card with a V-notch that allows the tick to be removed by sliding. An unfilled tick can also be removed with tape or adhesive plaster.
- Make sure no parts of the tick remain in the skin: this can cause inflammation.
- Note the place on the body and the date the tick bit and keep an eye on this spot for the next few weeks.
- CAUTION: Do not use alcohol, disinfectant or other products to remove the tick 'stun' the tick and definitely do not try to remove it with a lit cigarette or match. This will actually make the tick squirt venom into the wound.
- Advise the victim to consult a GP if an abnormal skin change occurs in the first weeks after the bite, such as a red widening ring (does not always occur!).
- See GP if in the months after tick bite:
  - a red spot develops on the skin that becomes progressively larger (larger than 5 cm)
  - a flu-like feeling develops with fever and muscle pain
  - you get double vision or a crooked face
  - you experience pain, loss of strength or tingling in your limbs
  - joint pain occurs
- For information on ticks, see for example: https://livis.nl/nieuws/een-tekenbeet-wat-nu
  Some flies and mosquitoes (e.g. tiger mosquitoes) can be infected. Wear long trousers and a long-sleeved shirt and use mosquito oil to reduce the chances of getting stung.

- Avoid contact with butterfly caterpillars with long hairs. These can be quite irritating.
- Information on the disease dengue, which can be transmitted by tiger mosquitoes: Dengue | LCI guidelines (rivm.nl); for the spread of the tiger mosquito: Mosquito maps (europa.eu)

9 Rules of conduct at specific sites

Visiting quarries

- Never enter an active quarry without first visiting the quarry office. Always seek permission (written or verbal) for the visit. You must report your arrival and departure on every visit.
- Be aware of the condition of the quarry: ask people on site where visitors are allowed to go and stand, what local hazards should be avoided, and where in the quarry monitoring is allowed.
- Ensure you know the warning signs for working with dynamite.
- Give precise instructions to participants about the visit to the quarry.
- Watch out for falling rocks, quarry walls - even in sand and clay quarries - can be very dangerous and can collapse without any warning. In quarries, the use of safety helmets is mandatory, sturdy shoes are recommended. Only sample at quarry walls when others are on the lookout for falling rock.
- Keep your distance from vehicles and machinery, always stay away from machinery.
- Never touch or pick up unexploded explosives, wires or detonators; if found, warn quarry management immediately.
- Beware of mud lakes and quicksand.

Outcrops along railways

- Permission is always required to visit outcrops or carry out surveys along railway tracks.

- Working along railway tracks is particularly dangerous: bear in mind that carriages protrude considerably over the rails. Make sure there is enough space for yourself when a train passes. Never walk through tunnels or over railway traffic bridges. During an excursion, participants should be appointed to ensure that everyone stays away from the rails and warn of passing trains. In some countries, trains run on the other side than YOU think.

Public road accesses
- Pay very close attention to motorised traffic. Some motorists drive on the far right (or left in some countries).
- In groups (excursions), attentiveness to traffic often decreases significantly.
- Appoint participants to ensure no one walks on the carriageway. Alert motorists to a roadside group.
- Do not leave litter on the carriageway.
- In some countries, wearing a distinctive road worker's jacket is mandatory.

Coastal accesses
- Always consult the coastguard or other authority about tides and local hazards such as unstable cliffs.
- Make sure you are aware of the tides and have an escape route at rising tide.
- If you have to walk on the mudflats do not get too close to mussel beds, you can easily get stuck in them which can lead to problems during rising tide.

Steep cliffs
- Do not climb steep rock faces. Use binoculars to study rocks that are in a place too dangerous to climb to.
- Always wear a safety helmet when working near steep walls.
- Do not take risks near unstable rock walls. Be careful not to dislodge any rock, others may be below you.
- Warn others if you loosen rocks.

Underground
- Ensure you have the right equipment and the necessary experience if you have to work underground. Never work alone.
- Inform someone of your departure, where you will work and your intended working hours underground. Also sign out upon your return.
- When visiting mines during excursions: all participants must scrupulously follow the instructions of the mine attendants.
- Never enter abandoned mine galleries.

10 Individual fieldwork

Some of the measures listed below have additional relevance in individual fieldwork and thus mainly relate to fieldwork after the second curriculum year.

- In the field, take a place to stay (hotel or tent) where other people are also staying. Inform yourself of the nearest telephone and medical assistance, as well as local emergency numbers. Make some effort to be able to ask for help in the local language if necessary.
- Consider potential safety issues or risks on site before starting fieldwork. Make a careful work plan, taking into account your experience and training, the nature of the terrain, and the weather. Be wary of overestimating your capabilities.
- Make sure YOU always know where you are on your map and know the shortest route to safe shelter. Know what to do in case of an emergency (e.g. accident, illness, bad weather, darkness).
- Always bring these items: small first-aid kit, some emergency rations (chocolate, biscuits, glucose tablets), an emergency blanket (gold/silver aluminium or large plastic bag), whistle, knife, torch, map, compass and watch. It is recommended to bring a GPS in areas where orientation is difficult (see also next item).
- Always take a mobile phone with you, but remember that in remote areas these may not always work due to lack of transmitter masts.
- When working in groups: be constantly aware of your partner's location, agree clear meeting places and times if you are going to work separately.
- Know how to use the international distress signal.
  Emergency signals

In case of an emergency, alarms can be raised in the following way:
  - six whistles OR six screams OR six flashes with a torch OR waving a brightly coloured cloth six times
  - 1 minute break
  - Repeat the six whistles, screams, flashes or swings.

On hearing such signals, the answer is:
  - three whistles OR three screams OR three flashes with a torch
  - repetition.

- If you are in distress, it is important not to exhaust yourself by whistling or screaming for too long in a row. Take regular rests, and continue the alarm after a while.

11 Operations

Hammers

- Always use a real geological hammer in the field.
- Use your geological hammer with caution, and only in places where its use is permitted. Never knock pieces out of walls or buildings.
- When hammering stones or chisels, safety glasses are mandatory. They provide protection from flying splinters or shards.
- Never use a hammer as a chisel to hit it with another hammer. This causes steel splinters. Only use chisels made of mild steel.
- Avoid hammering near other people and do not watch other people hammering. In a group, always warn that you will be hammering.
- Don't leave rock fragments lying around after hammering, clean up your mess!

Drilling in the field

Hard rocks

Taking small-diameter drill cores with portable drilling equipment is a new way of sampling rock outcrops. This method of sampling is relatively neat compared to hammer sampling, but one can completely deface outcrops. Observe the following guidelines.

- Always seek permission from the owner.
- Take cores from places on the wall that are least visible from the public road or from the access to the outcropping.
- If possible, plug the resulting holes with debris of similar material or fill the holes with slightly smaller-diameter cores drilled from loose blocks.
- Respect the feelings of other geologists who have imposed hammer bans in vulnerable places

Soft rocks and soil trap sites

Again, drilling must respect local conditions.

- Choose a place where no one will be obstructed while drilling. Get prior permission from the landowner.
- Gouge augers have sharp edges; watch out for cuts.
- Do not drill in (newly sown) fields, but only at the edge.

- Explore the drilling site well: avoid cable streets, pipelines, etc.
- Do not leave an open hole at the end of drilling or pot trap sampling: try to push the retrieved sediment back into the hole. Replace punctured major aquitards with benthonite.
- Be careful when transporting drill rods by bicycle.

Annex 2

RISK Inventory and Evaluation Fieldwork

The Faculty of Science of the Free University, Amsterdam has a policy to carry out (or have carried out) field activities safely and without risk to health. To this end, the faculty has drawn up the memorandum 'Safety around Field Activities'. As part of this memorandum, the risk inventory and evaluation below has been drawn up for this field activity. It is intended to make participants in fieldwork and excursions more aware of possible health and safety hazards. This risk inventory and assessment and measures will be discussed with the participants during the introduction to the field practicum.

| | Question -
Risk inventory | Yes/
No | If yes ->
Risk assessment ->
Appropriate measures and agreements |
|---|---|---|---|
| 1 | Is work being done alone? | | |
| 2 | Is there a contact person at the VU and can they contact family or acquaintances? | | |
| 3 | Is additional communication equipment necessary? | | |
| 4 | Is there any health risk due to the method of food and its preparation?
Are there any food allergies in the group? | | |
| 5 | Are there any special (working) conditions (heat, cold, UV radiation, high humidity)? | | |
| 6 | Do environmental conditions warrant precautionary measures (mountainous, volcanic, swamp, jungle)? | | |
| 7 | Do the flora and fauna present pose additional risks (parasites, reptiles, insects, poisonous plants)? | | |
| 8 | Does (local) transport pose risks (airline ('blacklist') car, boat, scooter, rail, roads)? | | |
| 9 | Are there special requirements and techniques related to the work (diving, climbing, sailing, navigation techniques, general (physical) fitness related to the effort to be made)? | | |
| 10 | Are certain (dangerous) machines or tools to be used (machinery, motor chain saw, drills, etc.)? | | |
| 11 | Are there any materials in use that need to be inspected/inspected/maintained (regularly) (e.g. diving equipment)? | | |
| 12 | Is there instruction in the use of applied equipment, materials, etc.? and is it up to date? | | |
| 13 | Is there any work in soil (pits, trenches, sewers, contaminated soil, etc.)? | | |
| 14 | Is there any work at height (scaffolding, | | |

	trees, rocks)?		
15	Are resources such as chemicals and/or fuels needed (use, storage, transport)?		
16	Are personal (protective) equipment required (gloves, goggles, helmets, fall protection, lamps, warm clothing, sun protection clothing)?		
17	Is the central first aid kit ready? Are the necessary resources present (bandages, disinfectants, bandages, etc.)? Do participants have their own basic first-aid kit?		
18	Are there any contagious diseases? Are vaccinations recommended for the area?		
19	Is there intensive contact with local people?		
20	Is there political instability/war/crime?		
21	Are there other circumstances that pose a risk? If so, which		

Fieldwork/excursion:

Period:

Lead teacher: