

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
1.	Inadequate organization of health and safety at work for the implementation of field trips		
1.1	Unclear responsibility and delegation of tasks	<ul style="list-style-type: none"> Lack of task awareness Lack of delegation of tasks to managers or functionaries, Lack of authority to issue instructions and make decisions, Unclear areas of responsibility 	<ul style="list-style-type: none"> Clear assignment of tasks to suitable and reliable employees based on their knowledge, experience and physical condition Coordination and delimitation of the areas of responsibility of the individual actors in the field exercise Determination of ways for reporting in the event of insufficient powers to remedy defects Granting sufficient time to perform the assigned tasks in the field of occupational health and safety
1.2	Lack of monitoring progress in the transferred tasks and control of the task completion	<ul style="list-style-type: none"> Lack of control over task completion Lack of corrective and enforcement action 	<ul style="list-style-type: none"> Establishing arrangements to monitor compliance with the tasks entrusted Regular (at least random) checks by the project/field trip leaders to ensure that the tasks assigned by them are actually being implemented Intervention of the project/field trip leader in the event of violations or errors that can lead to a risk Provide corrective action for non-performed tasks Make field trip participants aware of the consequences of non-performance of their duties
1.3	Insufficient fulfilment of the organizational duties	<ul style="list-style-type: none"> Insufficient information for participants Insufficient consideration of the regulations for field trips 	<ul style="list-style-type: none"> Implementation of information/preparatory event for participation in the field trip Processing of the form "Risk Assessment for Field trips"
1.4	Lack of ensuring necessary qualifications for occupational health and safety from field trip leaders, functionaries and employees with specific tasks	<ul style="list-style-type: none"> Lack of knowledge, experience, skills or Lack of physical fitness to perform the tasks Lack of retention of knowledge / life-long training 	<ul style="list-style-type: none"> Instruction for special activities by project management / field trip leader Complementing instruction in the event of changing conditions during the field exercise Intensive supervision/support of inexperienced participants by an experienced employee Control of the content of operating instructions in terms of understanding and implementation Consider the role model function of the supervisor(s)
1.5	Inadequate organization specific risk assessment	<ul style="list-style-type: none"> Lack of identification of hazards and lack of definition of concrete occupational health and safety measures, Failure to implement protective measures and monitor effectiveness Lack of documentation of the risk assessment 	<ul style="list-style-type: none"> Inclusion of all areas of work and activities Consideration of special groups of people (expectant mothers, young people, severely disabled persons, older employees, allergy sufferers, interns, students) Regular review of the effectiveness of protective measures Documentation of the results in the risk assessment Adaptation of the risk assessment in the event of changed conditions of the field trip
1.6	Travelling to countries with an increased security risk (war, riots, epidemics, terrorism)	<ul style="list-style-type: none"> Lack of knowledge about hazards and necessary protective measures 	<ul style="list-style-type: none"> The general conditions for the field trip are well known. It was checked whether there was a travel warning for the region In the event of emergencies, first aid or rescue is guaranteed by contact persons on site, in the country or continent, e.g. via travel insurance.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
1.7	Inadequate organization of occupational health care provision	<ul style="list-style-type: none"> Lack of mandatory and tender examinations for certain activities 	<ul style="list-style-type: none"> The employees were advised by the company medical service of the home University. Necessary vaccinations have been carried out.
1.8	Lack of information and involvement of contractors (e.g. mountain guides, specialist companies for seismic measurements)	<ul style="list-style-type: none"> Lack of task and competence assignments for cooperation with external companies and suppliers (e.g. mountain guides, specialist companies for seismic measurements) 	<ul style="list-style-type: none"> Consideration and contractual stipulation of work safety-relevant criteria when selecting external companies. Regulation of the role of external companies. Determination of a contact person for the external company. Assignment of the tasks of the contact person for coordinating the external companies
1.9	Inadequate organization of emergency measures, First aid	<ul style="list-style-type: none"> Lack of knowledge about hazards and necessary protective measures 	<ul style="list-style-type: none"> Lone work is not permitted. First aiders are available in sufficient numbers so that first aid can be provided. A mobile phone is available. Care is taken to ensure that it is charged (power bank etc.). Participants will be instructed on what to do in an emergency. The leader has informed him-/herself about the dangerous plants and animals found in the country. Antivenoms, e.g. for snake bites, are carried in case it is needed.
1.10	Inadequate testing of work equipment and installations requiring monitoring	<ul style="list-style-type: none"> Inadequate planning and implementation of audits Insufficient qualification of the test personnel 	<ul style="list-style-type: none"> Preparation of an overview of the type, scope and deadlines for the work equipment to be tested (e.g. ladders, liquefied petroleum gas systems, hand tools, Electrical equipment, brush cutters, chainsaws, ropes and slings, personal protective equipment, winches, vehicles). Commissioning of qualified persons or approved inspection bodies with the inspection of work equipment. Documentation of the tests.
2.	Unsafe transport during field exercises		
2.1	Unsecured cargo on / in the vehicle	<ul style="list-style-type: none"> Loose cargo (tools, measuring instruments etc.) in the passenger compartment and in the loading area 	<ul style="list-style-type: none"> Vehicles suitable for the terrain are used. The drivers were instructed in the use of the vehicles. (In the case of rental vehicles, by the employees of the rental station). Before starting the journey, the driver checks the vehicle for visible defects. Deficiencies will be documented. The vehicles used are equipped stops ensuring safety during loading. Cargo securing material, e.g. belts, nets, etc. is available. The vehicle drivers have been instructed on how to secure the load.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
2.2	Hazardous properties of the cargo (hazards, gasoline, compressed gases)	<ul style="list-style-type: none"> • Hazardous substances, e.g. nitrogen, • flammable liquids, e.g. petrol canisters, • compressed gas bottles, • biological agents 	<ul style="list-style-type: none"> • It has been clarified, whether the cargo is dangerous and whether it is approved for carriage (see Guidelines for the Carriage of Dangerous Goods - ADR). • Regulations have been made for the transport of hazardous substances: <ul style="list-style-type: none"> - Transport documents are available, - the dangerous goods are assigned to a respective class, - the dangerous goods are in a permissible packaging, - Packaging is marked in accordance with ADR, the vehicle is suitable for the transport of dangerous goods.
2.3	Risk that the vehicle tips over	<ul style="list-style-type: none"> • Overcharging or uneven loading 	<ul style="list-style-type: none"> • Vehicles are loaded in such a way that the total weight and axle loads are not exceeded. • When towing a trailer, the drawbar load on the tow bar is considered.
2.4	Danger from weather conditions (<i>snow, ice, floods, mud</i>)	<ul style="list-style-type: none"> • Risk of slipping due to tyres not suitable for the season's weather conditions 	<ul style="list-style-type: none"> • In winter, snow chains are carried for driving in mountainous regions. • The drivers are instructed in the use of snow chains
2.5	Danger due to impaired driving ability	<ul style="list-style-type: none"> • Alcohol, drug, or medication abuse 	<ul style="list-style-type: none"> • Drivers are instructed not to take any substances that impair their ability to drive.
3.	Incorrect/unsafe working/moving off-road		
3.1	Dangers when moving off-road	<ul style="list-style-type: none"> • twisting, slipping, falling, stumbling, e.g. over stones, uneven terrain • Falling down from mountains or edges of a quarry, • Sinking into uncompacted areas or bogs, • Breaking into water in case of fragile ice surfaces 	<ul style="list-style-type: none"> • Instruction for participants: Sturdy, closed-toe shoes must be worn. • Instruction for participants: Correct and careful off-road behavior
3.2	Hazards in open-air working	<ul style="list-style-type: none"> • Health hazards or death due to e.g. <ul style="list-style-type: none"> - Heatstroke - Frostbite - Thunderbolt - Flying objects (strong wind/storm). • Skin cancer caused by solar radiation. 	<ul style="list-style-type: none"> • Recreational facilities such as construction trailers or construction containers are available. (Can also be heated in case of cold). • There is a rule that in extreme weather conditions, e.g. storms, thunderstorms, heavy rainfall, the field exercise is canceled. • Employees are provided with breathable, windproof and waterproof clothing. • There is an opportunity to clean and dry the protective clothing. • Participants are advised to wear long-sleeved, closed-toe clothing and a hat, and to use sunscreen. • Employees can be provided with sunscreen. • Occupational health care "Natural UV radiation" can be offered to employees.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures	
		<ul style="list-style-type: none"> Poor hygiene 	<ul style="list-style-type: none"> A toilet is available in close proximity. Water connection or water canister with drinking water are set up as washing facilities Disinfectant is available, e.g. for disinfecting hands 	
		<ul style="list-style-type: none"> Exposure to microorganisms in/on waste 	<ul style="list-style-type: none"> Waste is collected, taken away and disposed 	
	3.3	Working in the dark	<ul style="list-style-type: none"> Injuries or death due to tripping, slipping, falling 	<ul style="list-style-type: none"> If work has to be carried out in the dark, the area of the site must be adequately illuminated with lamps. Minimum illuminance 200 lux.
	3.4	Working in the mountains	<ul style="list-style-type: none"> Health hazard due to altitudes over 2000 m above sea level (particularly critical: > 4000 m above sea level) 	<ul style="list-style-type: none"> Participants will be informed in advance that the field trip will take place at a high altitude. With regard to a possible hazard / exposure to an oxygen-poor atmosphere during activities above 2000m altitude, the participants were informed of the possibility of an individual consultation with the company doctor
			<ul style="list-style-type: none"> Injury or death due to a fall 	<ul style="list-style-type: none"> Personal protective equipment against a fall from a height is available. Instruction for participants: <ul style="list-style-type: none"> Handling of personal protective equipment against a fall from a height (theoretical and practical)
			<ul style="list-style-type: none"> Injuries or death caused by falling rocks or stones, e.g. under walls or overhangs. 	<ul style="list-style-type: none"> Safety helmets will be provided and care will be taken to ensure that they are worn Instruction for participants: <ul style="list-style-type: none"> Wear safety helmets.
		Hazards when working in a quarry	<ul style="list-style-type: none"> Injury or death from Crash Rockfall Splinter Landslides 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> characteristics of the terrain, wear sturdy, closed-toe shoes, do not get too close to the edges of a high level, cordoned-off areas in quarries may not be entered, wear safety helmets.
			<ul style="list-style-type: none"> Injuries caused by splinters when working on stones 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> make sure to keep a sufficient distance from other participants when chipping off rock so that other people are not endangered by splinters, Wear safety goggles.
	3.6	Hazards when working in public traffic areas	<ul style="list-style-type: none"> Injury or death from being hit or rolled over by vehicles. 	<ul style="list-style-type: none"> High-visibility vests according to DIN EN ISO 20471 are provided and care is taken to ensure that they are worn. Instruction for participants: <ul style="list-style-type: none"> hazards from vehicles, behaviour in public traffic areas, Security measures, e.g. pylons Wear a high-visibility vest.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
4.	Incorrect/unsafe sampling		
4.1.	Hazards when working on riverbanks and in bogs	<ul style="list-style-type: none"> • Death by drowning or sinking 	<ul style="list-style-type: none"> • Paths to the extraction point have been secured, e.g. by wooden planks. • Sampling tools are available so that there is no need to leave the paths. • If it is the shore area of a strongly flowing body of water or if the shore area is steeply sloping, life jackets are provided for sampling and care is taken to ensure that they are worn. • Instruction for participants: Wearing a life jacket (theoretical and practical instruction)
4.2	Hazards when working on bodies of water	<ul style="list-style-type: none"> • Death by drowning 	<ul style="list-style-type: none"> • A suitable boat or raft is available. • The boat or raft is inspected regularly, at least once a year. The test is documented. • Suitable holding options for users are available. • Devices can be secured against falling over, slipping, etc. • There are regulations on the conditions under which sampling must be stopped, e.g. wind speed, thunderstorms, etc. • Life jackets will be provided and care will be taken to ensure that they are worn. • Instruction for participants: <ul style="list-style-type: none"> - Operation of the boat/raft - inspect the boat or raft for visible defects before use, - maintain the load-bearing capacity, • wear life jackets (theoretical and practical instruction), • Regulation on the termination of sampling.
4.3	Dangers when using the drill rod with a drill rig	<ul style="list-style-type: none"> • Injuries caused by <ul style="list-style-type: none"> - sharp edges, - Falling over of the device, - improper handling, - parts flying away, - abrupt interruption of the borehole due to obstacles in the ground, - Breaking the drill rig • Noise-induced hearing loss 	<ul style="list-style-type: none"> • The soil conditions are known and a suitable drill rig is used. • The drill rig is subjected to a visual and functional inspection before and after each use. • Only instructed persons are allowed to use the drilling rig. • The drilling work is carried out with a minimum of two people. • Personal protective equipment, e.g. protective gloves, safety shoes, hearing protection are provided. • Instruction for participants: <ul style="list-style-type: none"> - Operation of the drilling rig, - Check the drill rig for visible defects before use, • wear personal protective equipment.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
4.4	Dangers of ice drilling	<ul style="list-style-type: none"> Icy waters: frostbite of body parts or death due to breaking of the ice and sinking into the water 	<ul style="list-style-type: none"> Before entering, it is checked whether the thickness of the ice is sufficient (load-bearing capacity) When working with a tripod or work equipment with a small contact surface, the contact surface is enlarged by means of aids (plates). (In the case of a tripod, the poles would drill into the ice when loaded. Tools for rescuing burglars are available, e.g. rescue poles, boards, ladders. Instruction for participants: <ul style="list-style-type: none"> information on load-bearing capacity, Working with a drill rig on an ice surface, What to do in the event of a rescue
4.5	Hazards when working in layers of earth	<ul style="list-style-type: none"> Skin hazard caused by <ul style="list-style-type: none"> damp earth, contact with pathogens in the soil, 	<ul style="list-style-type: none"> The area to be examined was tested in advance (sampling). A work and safety plan for work in contaminated areas has been drawn up Occupational health advice on hazards caused by pathogens in the soil has been provided. A skin protection plan is created and provided. For employees, skin protection, skin cleansing and skin care products are provided in accordance with the skin protection plan.
4.6	Dangers of finding ordnance (bombs, grenades, cartridges, etc.)	<ul style="list-style-type: none"> risk of fire and explosion, Health hazard due to e.g. contact with hazardous or chemical warfare agents. 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> if unusual objects are found, the work must be stopped immediately, the area is to be abandoned, the head must be informed, the police must be informed immediately, the site must be marked, secured and cordoned off until the arrival of the specialists.
5.	Exposure to animals, insects, plants or fungi		
5.1	Dangers from animals, insects	<ul style="list-style-type: none"> Diseases caused by e.g. <ul style="list-style-type: none"> Tick bite, (TBE or Lyme disease) Insect bite (malaria etc. during field exercises abroad) 	<ul style="list-style-type: none"> A tick tweezer or tick card is provided in the first aid kit. Employees who are in confirmed tick areas must be vaccinated against TBE. Tick bites are documented (first-aid book pad) Instruction for participants: <ul style="list-style-type: none"> Dangers from tick or insect bites, wear light-colored, long-sleeved and closed-toe clothing, at the end of work, search the entire body for the presence of ticks or tick bites, Enter tick bites in the first-aid book pad.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures	
		<ul style="list-style-type: none"> Allergic reactions of the skin due to contact with hairs of the oak processionary moth 	<ul style="list-style-type: none"> During field exercises in affected areas (usually in June), participants are instructed: <ul style="list-style-type: none"> wear long-sleeved, closed-toe clothing, Do not touch caterpillars and webs, In case of allergic reactions, consult a doctor. 	
		<ul style="list-style-type: none"> Rabies, illness or death from animal bites. 	<ul style="list-style-type: none"> Designated rabies districts will not be entered. An antidote to snake bites is available in the first aid kit. Instruction for participants: <ul style="list-style-type: none"> report animal bites to the leader, Consult a doctor. 	
		<ul style="list-style-type: none"> Disease caused by the fox tapeworm 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> Do not eat any fruits growing in the field, e.g. raspberries, etc. 	
	5.2	Health hazards caused by plants or mushrooms	<ul style="list-style-type: none"> Illness or death due to the consumption of poisonous plants, mushrooms. 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> do not eat plants and mushrooms.
	<ul style="list-style-type: none"> Health hazard from touching plants, e.g. phototoxic plants, hogweed, bergamot, angelica, etc. 	<ul style="list-style-type: none"> Instruction for participants: <ul style="list-style-type: none"> wear long-sleeved, closed-toe clothing, Exposure to existing plants where contact may cause symptoms of poisoning or skin irritation, In the event of allergic reactions, the leader must be notified, In case of allergic reactions, consult a doctor. 		
6.	Incorrect/unsafe handling of work equipment (equipment/tools) and hazardous substances			
6.1	Hazards when handling work equipment (equipment, tools)	<ul style="list-style-type: none"> Injuries caused by lack of instruction Electric shock Hand injuries caused by sharp-edged metal parts or wood splinters from hand tools (spade, shovel, etc.) Noise-induced hearing loss 	<ul style="list-style-type: none"> Work equipment is selected and used according to its intended use Operating instructions for handling dangerous machinery, e.g. drilling rig, are available. Electrically operated work equipment and power generators are regularly inspected by qualified electricians. Personal protective equipment will be provided. Instruction for participants: <ul style="list-style-type: none"> handling of hazardous work equipment on the basis of the operating instructions, Work equipment must be checked for visible defects before use, Work equipment must be cleaned and maintained daily, Deficiencies must be reported to the manager Wear personal protective equipment. 	

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
	6.2 Hazards in the handling of hazardous substances	<ul style="list-style-type: none"> • Risk of fire and explosion due to fuels, oils, flammable gases and paints • Risk of chemical burns due to acids and alkalis 	<ul style="list-style-type: none"> • It was examined whether hazardous substances can be substituted (replacement of hazardous substances with less hazardous substances). • Aids for the transfer of hazardous materials are available (tipper, pump, lifter, hopper). • Operating instructions for the safe handling of hazardous substances are available. • Personal protective equipment will be provided. • Instruction for participants: <ul style="list-style-type: none"> - handling of hazardous substances on the basis of the operating instructions, • wear personal protective equipment.
7.	Incorrect/unsafe lifting, carrying as well as transporting loads		
7.1	Hazards/stress when lifting, carrying and transporting by hand	<ul style="list-style-type: none"> • Health problems caused by lifting and carrying heavy loads. 	<ul style="list-style-type: none"> • If no means of lifting or transport are available, heavy loads can only be carried together by several people.
7.2	Hazards when transporting tools and materials with means of transport	<ul style="list-style-type: none"> • Risk of injury due to moving means of transport, e.g. due to falling loads 	<ul style="list-style-type: none"> • A suitable means of transport, e.g. sack truck, transport trolley, is available for the transport of heavy objects. • Instruction for participants: <ul style="list-style-type: none"> - Means of transport must be visually inspected for defects before use, • Deficiencies must be reported to the director, • the carrying capacity of the means of transport must be maintained, • Tools and materials must be evenly distributed on the means of transport and secured against falling.

No.	Hazard and stress factor	Description of the hazard / load	Examples of concrete Protective measures
8.	<p>Lack of consideration of weather influences, hygiene, lighting, etc. when spending the night in the terrain</p>		
8.1	Dangers of spending the night off-road	<ul style="list-style-type: none"> • Rain, Thunderstorm, Storm • Cold, hypothermia, freezing to death • Inadequate lighting • Inadequate hygiene • Microorganisms in/on waste 	<ul style="list-style-type: none"> • Suitable overnight accommodation, e.g. tents, huts, etc. are available • Overnight accommodations can be heated, e.g. permanent huts. • Participants will be informed in advance that, for example, suitable sleeping bags must be carried. • There is sufficient lighting for the overnight accommodation. • Toilets can be used, e.g. a toilet is available. • Water connection or water canister with drinking water are set up as washing facilities. • Disinfectant is available. • Opportunity for body cleansing on site will be offered. • Waste is collected, taken away and disposed of.