

FIELD WORK RISK ASSESSMENT

Introduction

This risk assessment addresses the hazards, risks and control measures associated with most generic field work research (including much mainly office-based work) and can be used as a project specific risk assessment, subject to some exclusions. It draws attention to the hazards and control measures for carrying out field work overseas and has been adapted specifically for use in Peru.

Peru is a safe country with little or no threat to visitors. The appearance of foreigners, even in remote districts is not unusual and does not attract the attention of police or military as they might in other countries. However, basic common sense applies to working in unfamiliar countries and situations, as it would anywhere. Additionally, it is necessary to be aware of some specific environmental conditions that apply to our field work as detailed below.

Hazards

The safety information in this risk assessment covers the following hazards which are commonly associated with field work overseas. (this covers both generic and project specific concerns):

- 1) Hazards associated with *lone working and security.*
- 2) Hazards associated with *dealing with other people.*
- 3) Hazards associated with *different environments.*
- 4) Hazards linked to *general health and fitness.*
- 5) Hazards linked to *use of drones.*

1) Hazards associated with *Lone Working*

Lone working is defined as working out of the eye sight of other colleagues. These hazards apply to much generic geography fieldwork where you carry out work alone, as well as travelling to and from research sites.

Many of the control measures are common sense and apply to everyday life as well as research but are important to observe.

Hazard	Risk	Control Measures
<i>Lone Working- Miscellaneous Hazards</i>	<i>Difficulties in summoning help when required; risk of abuse/attack</i>	<ul style="list-style-type: none">• Where possible work, as a minimum, in pairs.• Where possible carry a mobile phone. Mobile coverage 100% in Peru. Keep mobile charged and ensure you have a charger with you.• Ensure details of the work plan are left with colleagues in the department or at home prior to any trip. These will be in the project dropbox.• Specify dates and times of departure and return. If your plans change, please inform someone.• Do not carry valuables or large sums of money unless you need to.

		<ul style="list-style-type: none"> • Use a "check-in" system with colleagues and/ or supervisor. If you do not phone or return at a certain time arrange for suitable action to be taken. • Trust your intuition - If you feel uneasy, do not ignore it.
Lone Working- Travelling alone	On foot - risks of personal attack/abuse	<ul style="list-style-type: none"> • Avoid walking alone at night. • Keep to busy, well lit roads. • Do not wear headphones when walking in towns. • Plan your journey in advance - tell someone which route you mean to take and estimated time of arrival at your destination. • Walk with confidence and purpose – do not look as if you are not sure of where you are going. • Make sure wallets, valuables, equipment etc are not visible. • Dress discreetly - try to fit in without attracting attention.
	By Car	<ul style="list-style-type: none"> • Make sure the vehicle is in good working order before setting off. • Make sure you have change for a telephone in an emergency. • Plan your journey in advance - tell someone which route you mean to take and estimated time of arrival at your destination. • Do not leave valuables visible in the car - even when you are in it. Keep bags etc. out of reach of open windows. • If driving ensure headlights on at all times during the day – this is a legal requirement. • If stopped by the police or military do exactly as asked. • Do not argue or dispute anything said of what you may have done. • At military checkpoints do not move quickly or use a camera • When parking in daylight, consider what the area will be like after dark. • When returning to the vehicle, check to see if someone is hanging around. If so wait safely out of sight and do not confront. • If you are forced to stop by another car, stay in the car, lock the doors and speak through a slightly open window. • Make sure you know what to do if the car breaks down. (i.e. who to phone; where to phone from etc).
Lone Working- Staying in Hotels	Risks to personal safety	<ul style="list-style-type: none"> • At reception, try to avoid letting other people overhear your name and room number. • Do not go into other people's rooms unless you know it is absolutely safe. • Do not allow people into your room unless you know who they are. • If you hear a disturbance, stay in your room and phone for information.

2) Hazards associated with *Dealing with Other People*

Field work research often involves dealing with other people. Most research is carried out without problems, but it is important to be aware of the guidelines for good practice in dealing with the public, and especially entering other people's homes.

Hazard	Risk	Control Measures
Dealing with People - Other People's Homes	Associated Risks	<ul style="list-style-type: none"> • See also <i>Lone working</i>.

	Risk of personal attack/abuse	<ul style="list-style-type: none"> Do not enter the house if the appropriate person is not available. Wait to be invited in. If the person is drunk or aggressive, do not enter. Ensure you can get out quickly if necessary. If you feel threatened at any point, make an excuse to leave.
	Causing offence, leading to abuse/attack	<ul style="list-style-type: none"> Try not to react to dirty or smelly surroundings. Do not spread your belongings around. Take care with documents you may not want them to see. Let them know how much of their time you will need.
	Other People's "Pets" - risk of injury, allergy, etc.	<ul style="list-style-type: none"> Do not touch cats or dogs. If entering a house with a dog or cat, ask that the animal be put in another room if you feel uncomfortable. If you are "wary" of a dog, do not enter the house unless the owner is prepared to remove the animal from the room you are going to be in. (Be polite and tactful when asking!) See also <i>allergies and health</i>
Dealing with People - Unexpected Behaviour	Risk of personal attack/abuse due to misunderstanding of nature of work.	<ul style="list-style-type: none"> Be aware of any delicate issues involved with discussions, e.g. before asking a miner or farmer questions regarding their activities, explain why you need to know. Ensure landowners and their employees know who you are and what you are doing.
	Aggressive Behaviour	<ul style="list-style-type: none"> Do not underestimate the importance of body language. Talk yourself out of problems; placate rather than provoke. Do not turn your back on someone who is behaving aggressively. Stay Calm, speak gently and slowly. Do not be enticed into an argument. Avoid an aggressive stance. Crossed arms, hands on hips or raised hands will challenge and confront. Keep your distance. Never try to touch someone who is angry -this will not calm the situation. Keep your eye on potential escape routes
	Physical attack	<ul style="list-style-type: none"> Try to get away as quickly as possible. Move towards a place where you know there will be other people. Shout and scream - shout something practical like "call the police!" or "Fire!" If grabbed and unable to break free - pretend to vomit. This will often have the desired effect!
Dealing with People - Public Places	Causing offence , leading to abuse/attack	<ul style="list-style-type: none"> Do not stand in places where you will be causing an obstruction. Always carry your passport/ID card and be prepared to identify yourself. Make sure you have sought permission from relevant authorities to work in your chosen location.

3) Hazards associated with different *Environments*

Different environments will involve different hazards, and it is important to plan for these. Please ensure you have read and understood the travel advisory information for Fieldwork in Peru.

Hazards	Risk	Control Measures
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Environment - Location	Risk of causing offence which may lead to personal attack/abuse.	<ul style="list-style-type: none"> • Respect must be paid to local customs and problems, and advice taken from local contacts, embassies etc. • Dress appropriately.
	Working within other establishments, businesses, laboratories	<ul style="list-style-type: none"> • Ensure establishment has their own safety guidelines in place. • Whilst on the premises follow their guidelines.
	Working beside major roads	<ul style="list-style-type: none"> • Wear brightly coloured, conspicuous clothing. • Avoid having your back towards the traffic flow.
	Working at high elevation	<ul style="list-style-type: none"> • Ensure you have read the travel advisory on the dropbox and take adequate precautions to mitigate the possible effects of working at altitude. • Ensure appropriate clothing worn. • Ensure you are equipped with hat, sunglasses and sunblock. See travel advisory
	Working in or near rivers	<ul style="list-style-type: none"> • Wear suitable clothing for work in rivers, as determined by altitude and climate. • Ensure attention given to uneven/unconsolidated surfaces. • Ensure attention given to slippery surfaces when working in rivers or wetlands. • Ensure attention given to underwater obstacles. • Avoid walking through potentially deep mud. • Ensure attention paid to weather conditions and changing river discharge. • Do not enter fast flowing or possibly deep waters • Ensure that you are not working alone.
Environment – District	Risk of attack/abuse and personal injury	<ul style="list-style-type: none"> • Avoid areas known to be "unpleasant" • Consult Local Community groups, Local Authorities, Police etc. for information and possible contact names before setting out. • Walk with confidence and purpose – do not look as if you are not sure of where you are going. • Do not carry more money than you need to. • Dress appropriately - try to fit in without attracting attention.
	Risk of getting lost - this may lead to straying into high risk areas.	<ul style="list-style-type: none"> • Study maps of the area before setting out. Do not rely on mobile GPS. • Plan your route carefully. Ensure you know of a second route should the first be impassable. • Ensure you have a means of raising alarm if you are lost.

4) Hazards linked to *General Health and Fitness*.

There are additional hazards to do with general health associated with working in the field, accidents and problems with allergies are most common in unfamiliar environments. The following should be used as a guideline. Please ensure you have read the travel advisory for work in Peru and have fully understood the health and medical advice sections.

Hazard	Risk	Control Measures
Health - Accidents	Risk of injury	<ul style="list-style-type: none"> • For joint projects in remote areas ensure that one of the fieldwork team is trained in First Aid, carry a First Aid kit and know where it is. • Confirm contents of First Aid Kit appropriate to conditions prior to setting off.

		<ul style="list-style-type: none"> • Be aware of where medical Supplies or treatment can be bought or received if there is an accident • Have plans of action and be aware of where help can be sought should an accident occur in a remote location. • <i>Remember that it is essential to fill out an accident report and return it to the Departmental Safety Officer on return. It may help to make notes as soon after the incident as is possible.</i>
Health - Medical Conditions and General Fitness	Risk of illness whilst in the field	<ul style="list-style-type: none"> • Ensure any necessary medication is carried at all times • Ensure someone else is aware of the medical conditions and will recognise signs and symptoms. They should also be informed of the location of medication. • Diabetics on insulin should ensure sufficient food is carried in case there is a delay in returning.
	Fatigue leading to lack of concentration, accidents and risk of injury	<ul style="list-style-type: none"> • Do not try to do too much in one day, especially if the work is to be followed by a long drive home and or further work in the evening. • Lack of sleep and fatigue can lead to accidents - ensure sufficient rest is taken. • Before carrying out a potentially dangerous task (ensure you are not working alone) make a self- assessment of your mental and physical state and ability to carry out the task.
	Level of Physical Fitness leading to risk of personal injury/illness	<ul style="list-style-type: none"> • Know your limitations - do not be forced to over-stretch yourself. • Do not carry excessive weights or awkward field equipment without assistance. • Do not be afraid to tell someone if you feel unwell or cannot carry on with a task. • Plan your work within your limits. • If you feel unwell - stop.
Health - allergies	Insect bites and some plant material or food may cause allergic reactions - Allergic reactions can cause discomfort and in severe cases anaphylactic shock	<ul style="list-style-type: none"> • If aware of an allergy, carry any necessary medication. Be aware that some forms of anti-histamine can cause drowsiness. If affected do not continue with fieldwork. • Be cautious of the first signs of allergic reaction and DO NOT ignore them. • Seek medical attention immediately for suspected anaphylactic shock.
Health – bites	Animal, arachnid or reptile bites can cause serious health complications	<ul style="list-style-type: none"> • Do not touch dogs or cats in rural districts at all. • Avoid touching or approaching snakes, spiders or mammals unless familiar with them or they are part of your study. • Take care to check that where you put your hands or feet is not occupied by a spider, snake or other creature. • In the event you think you may have been bitten by a snake, spider, cat or dog you MUST inform a colleague or supervisor immediately.
Health – general	Health risks associated with work in Peru	<ul style="list-style-type: none"> • Ensure you have read the travel advisory in the dropbox and in particular the medical issues highlighted. • Ensure you have followed the advice offered in the travel advisory.
Health -Phobias		<ul style="list-style-type: none"> • Individuals who have phobias relating to e.g. wasps and bees, should inform fieldwork supervisors and be "buddied" with others who do not. • Try to avoid situations which may bring you into contact with the object of your phobia.

		<ul style="list-style-type: none"> • Ensure at least one other member of the group is aware of the problem.
	Alcohol - Risks of dehydration; inability to work due to hangover; in cold weather, alcohol consumption can lead to hypothermia	<ul style="list-style-type: none"> • Do not drink more than moderate amounts of alcohol the night before going into the field. • Do not drink alcohol during fieldwork • Be aware that alcohol can impair judgement and will remain in the system for several hours after consumption. • Do not drink alcohol before travelling to higher altitudes.
	Miscellaneous Risks - Food poisoning, dehydration, allergies	<ul style="list-style-type: none"> • In remote/overseas locations - Be wary of accepting ice in drinks. • In remote/overseas locations be cautious with what you eat - particularly salads. • Do not drink tap, river or lake water. • Caffeinated drinks (coffee, Cola etc.) can enhance dehydration - avoid drinking them in hot weather. • Be cautious of the first signs of allergic reaction and DO NOT ignore them.

5) Hazards linked to *Use of drones*.

Drones are called many different things in different documents. They may be referred to as Remote Piloted Aircraft Systems (RPA/RPAS), Unmanned Aerial Vehicles (UAV's), Unmanned Aircraft Systems (UAS's), Small Unmanned Aircraft (SUA's), Small Unmanned Surveillance Aircraft (SUSA's), multi-rotors, quadcopters, etc.; the list goes on. In this document we use the term drone to refer to the remotely operated multi-rotor vehicles we use for field survey work.

The use of drones in Peru is now common-place: Universities, mining companies, farmers and private individuals use them widely. The regulations relating to their use are similar to those in the UK. Our use of drones in Peru is governed by the following guidelines and protocols.

It is essential that any drone destined for field use is packed appropriately to protect fragile and costly equipment from damage whilst in transit. That is, either while being transported on a flight or in any vehicle being used in the field. At no time should a drone be transported out of its containing box.

Hazard	Risk	Control Measures
Equipment-operators.	Field use not efficient - data not collected or data inadequate.	<ul style="list-style-type: none">• Field operator to be familiar with the functioning of the drone.• Field operator to work at least one other person who can operate drones.• Work plan details to be agreed with colleagues in the department or at home prior to any trip.• Work plan to be agreed with Peruvian collaborator.• Awareness of any local restrictions and regulations to be explained to all.
Equipment-field workers and other persons.	In-field injury - risks of personal injury.	<ul style="list-style-type: none">• Batteries to be charged and checked prior to departure.• Drone functions check to be applied prior to flying.• Flight objectives and plans to be discussed and agreed with all field workers.• Flight to be announced to field workers in the field.• Drone to be placed away from the field vehicle in an un-obstructed location.• Drone flown from a mat to avoid dust being sucked in to the drone or dust and other particles blown towards the operator or other fieldworkers present.• Field workers on site to wear safety glasses for take-off and landing.
Equipment-field environment.	In field damage: risks of colliding with obstacles.	<ul style="list-style-type: none">• Drones to be flown at study sites, or as agreed with the collaborating sponsors.• Drones to be flown from flat open areas with good clearance for take-off and landing.• Drones to be flown away from restricted areas; Urban areas, industrial complexes, military bases and airports.• Drones to be flown with due care and attention with regard to other commonly known or possible obstacles: electricity power lines, traffic, livestock, flocks of birds.• Drones to be flown with due regard for local conditions: katabatic and anabatic winds, electrical storms, rain, dusty conditions on landing site or atmosphere in area of drone use.

		<ul style="list-style-type: none"> Operator and field worker awareness of local conditions and communication of risks.
Equipment-functioning	Drone dysfunction: data not collected or drone functioning badly.	<ul style="list-style-type: none"> Store in secure casing used during transportation. Check that transportation case is adequate prior to the trip.
Equipment-emergency procedures.	Operator failing or accident: emergency needs.	<ul style="list-style-type: none"> Second operator always on call. Ensure mobile phone carried at all times. Ensure in-country fieldworkers know the emergency service numbers.

PROJECT DETAILS

Title of Project:

Environmental Impact Analysis Processes: Resource Exploitation, Environmental quality and impact mitigation.

Brief description of project:

A collaborative project developing advanced technologies and methods for tracing and analysing the dispersion and concentration of soluble residues in river systems and the wider environment.

Names of Field Research Team:

Name of Supervisor:

Declaration

We have reviewed and assessed the possible hazards that might arise from the work planned for the project detailed above. All persons carrying out this work declare that they have read, understood and agree to abide by the safety instructions and control measures in this RISK ASSESSMENT and the TRAVEL ADVISORY on the drop-box. This assessment will be reviewed if there is a significant change to the project, and annually for projects of over one year's duration.

Trip dates:

Trip destinations: Departments of Lima and Moquegua, Peru,

Researcher's:

1 - Signed:

2 – Signed:

3 – Signed:

4 – Signed:

Supervisor:

Review date for risk assessment: