

## FIELD WORK RISK ASSESSMENT Summary

### Introduction

This risk assessment summary addresses the hazards, risks and control measures associated with most generic field work research and can be used as a project specific risk assessment. It draws attention to the hazards and control measures for carrying out field work overseas and has been adapted specifically for use in Peru.

This assessment is written on the basis that basic common sense approach will be applied to working in unfamiliar situations and remote areas. It is also 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:

- 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 fieldwork where you 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.

Hazard	Risk	Control Measures
<b><i>Lone Working - various Hazards</i></b>	<b><i>Difficulties in calling for help when required</i></b>	<ul style="list-style-type: none"> <li>• Where possible work, as a minimum, in pairs.</li> <li>• Where possible carry a mobile phone or walkie talkie.</li> <li>• Ensure details of the work plan are left with colleagues.</li> <li>• Specify dates and times of departure and return. If your plans change even slightly, you must inform someone.</li> <li>• Use a "check-in" system with colleagues. If you do not phone or return at a certain time, agree suitable action to be taken.</li> </ul>
	<b><i>By Car</i></b>	<ul style="list-style-type: none"> <li>• Make sure the vehicle is in good working order before setting off.</li> <li>• Plan your journey in advance - tell someone which route you mean to take and estimated time of arrival at your destination.</li> <li>• Do not leave valuables visible in the car - even when you are in it. Keep bags, ..... hidden and out of reach of open windows.</li> <li>• If driving, ensure headlights are on at all times during the day – this is a legal requirement.</li> <li>• When returning to the vehicle, check that no-one is hanging around.</li> <li>• Make sure you know what to do if the car breaks down. (i.e. who to phone; where to phone from etc).</li> </ul>
<b><i>Lone Working - Staying in Hotels</i></b>	<b><i>Risks to personal safety</i></b>	<ul style="list-style-type: none"> <li>• Do not allow people into your hotel room unless known to you.</li> <li>• If you hear a disturbance, stay in your room and phone for information.</li> </ul>

## 2) Hazards associated with dealing with Other People

It is important to be aware of the good practice in dealing with the public, and especially when entering on to other people's land.

Hazard	Risk	Control Measures
<b>Dealing with People – -access</b>	<b>Risk of personal attack/abuse</b>	<ul style="list-style-type: none"> <li>Do not trespass, if it is not possible to obtain permission.</li> </ul>
<b>-pets</b>	<b>"Pets" - risk of injury, allergy, rabies, etc.</b>	<ul style="list-style-type: none"> <li>Do not touch cats or dogs or any other animal.</li> <li>If accessing land with a dog or cat, ask that the animal be kept under control by the owner.</li> </ul>
<b>-unexpected behaviour</b>	<b>Risk of personal attack/abuse due to misunderstanding of nature of work.</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Ensure landowners and their employees know who you are and what you are doing.</li> </ul>
	<b>Aggressive Behaviour</b>	<ul style="list-style-type: none"> <li>Do not underestimate the importance of body language.</li> <li>Talk yourself out of problems; placate rather than provoke.</li> <li>Do not turn your back on someone who is behaving aggressively.</li> <li>Stay Calm, speak gently and slowly.</li> <li>Do not be enticed into an argument.</li> <li>Avoid an aggressive stance. Crossed arms, hands on hips or raised hands will challenge and confront.</li> <li>Keep your distance.</li> <li>Establish potential escape routes.</li> </ul>
<b>Dealing with People - Public places</b>	<b>Causing offence, leading to abuse/attack</b>	<ul style="list-style-type: none"> <li>Do not stand in places where you will be causing an obstruction.</li> <li>Always carry your passport/ID card and be prepared to identify yourself.</li> <li>Make sure you have sought permission from relevant authorities to work in your chosen location.</li> </ul>

## 3) Hazards associated with different Environments

Different environments will involve different hazards, and it is important to plan for these.

Hazards	Risk	Control Measures
<b>Environment - Location</b>	<b>Working within other establishments: businesses, laboratories, .....</b>	<ul style="list-style-type: none"> <li>Ensure an establishment has its own safety guidelines in place.</li> <li>Whilst on the premises follow their guidelines.</li> </ul>
	<b>Working beside major roads</b>	<ul style="list-style-type: none"> <li>Wear brightly coloured, conspicuous clothing.</li> <li>Avoid having your back towards the traffic flow.</li> </ul>
	<b>Working at high elevation</b>	<ul style="list-style-type: none"> <li>Ensure you take adequate precautions to mitigate the possible effects of working at altitude. Be prepared to evacuate at short notice to a lower altitude.</li> <li>Ensure appropriate clothing worn to stay warm and dry.</li> <li>Ensure you are equipped with hat, sunglasses and sunblock.</li> <li>Carry plenty of water to ensure hydration.</li> </ul>
	<b>Working in or near rivers</b>	<ul style="list-style-type: none"> <li>Wear suitable clothing for work in rivers, as determined by altitude and climate.</li> <li>Ensure attention given to uneven/unconsolidated and slippery surfaces.</li> <li>Ensure attention given to underwater obstacles, deep mud, etc.</li> </ul>

		<ul style="list-style-type: none"> <li>• Ensure attention paid to weather conditions and changing river discharge.</li> <li>• Do not enter fast flowing or possibly deep waters.</li> <li>• Never work alone.</li> </ul>
<b>Environment – Urban areas</b>	<b>Risk of attack/abuse and personal injury</b>	<ul style="list-style-type: none"> <li>• Avoid areas known to be ‘unpleasant’, ‘dangerous’, ....</li> <li>• Consult Local Community groups, Local Authorities, Police etc. for information and possible contact names before setting out.</li> <li>• Walk with confidence and purpose – do not look as if you are unsure of where you are going.</li> <li>• Do not carry more money/valuables than you need to.</li> <li>• Dress appropriately - try to fit in without attracting attention.</li> </ul>
	<b>Risk of getting lost - this may lead to straying into high risk areas.</b>	<ul style="list-style-type: none"> <li>• Study maps of the area before setting out.</li> <li>• Plan your route carefully. Ensure you know of a second route should the first be impassable.</li> <li>• Ensure you have a means of raising alarm, if you are lost.</li> </ul>

#### 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. Please ensure you have read the travel advisory for work in Peru and have fully understood the health and medical advice sections.

<b>Hazard</b>	<b>Risk</b>	<b>Control Measures</b>
<b>Health - Accidents</b>	<b>Risk of injury</b>	<ul style="list-style-type: none"> <li>• Ensure that someone in the fieldwork team has good First Aid knowledge.</li> <li>• Carry a First Aid kit appropriate to the conditions and keep it accessible.</li> <li>• Be aware of where medical supplies or treatment can be obtained, if there is an accident, especially in remote areas.</li> </ul>
<b>Health - Medical Conditions &amp; General Fitness</b>	<b>Risk of illness whilst in the field</b>	<ul style="list-style-type: none"> <li>• Ensure any necessary/regularly taken medication is carried at all times.</li> <li>• Ensure someone else is aware of your medical conditions and will recognise signs and symptoms. They should also be informed of the location of your medication.</li> <li>• Diabetics on insulin should ensure sufficient food is carried in case there is a delay in returning.</li> </ul>
	<b>Fatigue leading to lack of concentration, accidents and risk of injury</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Lack of sleep and fatigue can lead to accidents - ensure sufficient rest breaks are taken.</li> </ul>
	<b>Level of Physical Fitness leading to risk of personal injury/illness</b>	<ul style="list-style-type: none"> <li>• Know your limitations - do not be forced to over-stretch yourself.</li> <li>• Do not carry excessive weights or awkward field equipment without assistance.</li> <li>• Plan your work within your limits and if you feel unwell - stop.</li> </ul>
<b>Health - allergies</b>	<b>Insect bites and some plant material or food may cause allergic reactions -</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Seek medical attention immediately if there is a risk of anaphylactic shock.</li> </ul>
<b>Health – bites</b>	<b>Animal, arachnid or reptile bites</b>	<ul style="list-style-type: none"> <li>• Do not touch or approach any animals, especially in rural districts.</li> <li>• Take care to check that where you put your hands or feet is not</li> </ul>

		occupied by a spider, snake or other creature. <ul style="list-style-type: none"> <li>In the event you think you may have been bitten by an animal you MUST inform a colleague or supervisor immediately.</li> </ul>
<b>Health – phobias</b>		<ul style="list-style-type: none"> <li>Individuals who have phobias relating to e.g. dogs, wasps, bees, etc must inform fieldwork supervisors and be "buddied" with others who do not.</li> </ul>
	<b>Alcohol</b> - Risks of dehydration; inability to work due to hangover; in cold weather, alcohol consumption can lead to hypothermia.	<ul style="list-style-type: none"> <li>Do not drink more than moderate amounts of alcohol the night before going into the field.</li> <li>Do not drink alcohol during fieldwork - alcohol can impair judgements and will remain in the system for several hours after consumption.</li> </ul>
	<b>Miscellaneous Risks</b> - Food poisoning, dehydration, allergies	<ul style="list-style-type: none"> <li>In remote/overseas locations be cautious with what you eat - particularly salads, iced water, ....</li> <li>Do not drink tap, river or lake water.</li> <li>Caffeinated drinks (coffee, cola etc.) can increase dehydration - avoid drinking them a lot in hot weather and at altitude.</li> </ul>

### 5) Hazards linked to *Use of drones*.

Drones can also be called 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. In this document we use the term 'drone' to refer to the remotely operated multi-rotor vehicles used for field survey work.

The use of drones in Peru is now common-place: Universities, mining companies, tourist lodges, 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 in any vehicle being used in the field. At no time should a drone be transported out of its containing box.

<b>Hazard</b>	<b>Risk</b>	<b>Control Measures</b>
<b>Equipment - operators</b>	<b>Field use inefficient</b> - data not collected or data inadequate.	<ul style="list-style-type: none"> <li>Field operator to be familiar with the functioning of the drone.</li> <li>Field operator to work with at least one other person who can also operate drones.</li> <li>Awareness of any local restrictions and regulations to be explained to all.</li> </ul>
<b>Equipment-field workers and other persons.</b>	<b>In-field injury</b> - risks of personal injury.	<ul style="list-style-type: none"> <li>Drone functions to be checked prior to flying.</li> <li>Flight to be announced to field workers in the field.</li> <li>Drone to be placed away from the field vehicle in an un-obstructed location.</li> <li>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.</li> <li>Field workers on site to wear safety glasses for take-off and landing.</li> </ul>
<b>Equipment-field environment.</b>	<b>In field damage:</b> risks of colliding with obstacles.	<ul style="list-style-type: none"> <li>Drones to be flown from flat open areas with good clearance for take-off and landing.</li> <li>Drones to be flown away from restricted areas: urban areas, industrial complexes, military bases and airports.</li> <li>Drones to be flown with due care and attention with regard to other commonly known or possible obstacles: electricity power lines,</li> </ul>

		traffic, livestock, flocks of birds. <ul style="list-style-type: none"> <li>• Drones to be flown with due regard for local conditions: katabatic and anabatic winds, electrical storms, rain, dusty conditions, etc.</li> </ul>
<b>Equipment-functioning</b>	<b>Drone dysfunction:</b> data not collected or drone not functioning.	<ul style="list-style-type: none"> <li>• Store in secure casing during transportation.</li> <li>• Ensure that all parts fully connected/installed.</li> </ul>
<b>Equipment-emergency procedures.</b>	<b>Operator failing or accident:</b> emergency needs.	<ul style="list-style-type: none"> <li>• Second operator always on call.</li> <li>• Ensure mobile phone carried at all times.</li> </ul>

## **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 leads:**

**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:**

**\*Participating Researcher's:**

1 - Signed:

2 – Signed:

3 – Signed:

**\*Supervisor:**

**\*Review date for risk assessment:**