

Expedition Handbook

Planning your research

Written for students
by students



Publication

This handbook should be used only for advice and guidance. The onus of responsibility therefore lies with those undertaking the expedition. It is their responsibility to research up-to-date requirements, rules, forms, etc.

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1. Introduction

Planning an expedition? Not sure what you need?

The aim of this guide is to help you organise and implement an expedition which will form the basis of your dissertation. Advice from staff, previous expedition teams and grant bodies has been combined into this guide. This booklet can be used for any student wishing to carry out research outside of the UK. It will also be helpful for those planning UK-based fieldwork, but it should be noted that certain funding options may only be available to overseas projects (see section 11) and that certain elements of this guide may not be applicable.

By planning your own expedition, you have the chance to visit exciting countries and see some amazing geographical phenomena, such as the glaciers in the Arctic Circle or the volcanoes in South America! You can focus your research in an area that interests you, either academically or personally, and plan an exciting expedition accordingly.

Organising and participating in an expedition gives you a number of key skills, which are very appealing to potential employers, including:

- Confidence, self-esteem, maturity, self-awareness and independence.
- The ability to be part of a team, to lead and be led.
- An ability to communicate with others, friends and new acquaintances, day-to-day and under pressure.
- Critical appraisal skills.
- An understanding of the importance of humility, empathy, compassion, gratitude and pride.
- Organising, time and project management, planning and preparing.
- Problem solving, flexibility, adaptability and initiative.
- Skills to assess and manage risk.
- Financial management, budgeting and the value of money.
- Knowledge of how to travel safely and responsibly through other countries

Deciding whether or not to plan an expedition usually depends on your need for primary data. If your project will consist of secondary data, then going into the field may not be very useful for your project, unless you require ground-truthing of secondary data, however primary data collection has many advantages and disadvantages, as shown below.



Advantages of collecting primary data:

- Dissertations that are begun earlier tend to be the strongest.
- Addresses specific research issues related to your aims and objectives.
- Receive data that is not biased by the interpretation and/or processing applied by others.
- Recent data collection so the information is very up-to-date.
- Practical experience of using equipment and planning fieldwork.
- Improves skills and employability.
- Team data collection allows the integration and use of various datasets.

Disadvantages of collecting primary data:

- High cost of travel and preparation.
- Time consuming.
- Greater amount of resources and equipment required.
- Early preparation is necessary, although you are prepared much earlier than others and you can get more feedback through the process.

Thought about further study?

Doing overseas fieldwork for your undergraduate dissertation can help you to stand out, not just for job applications, but also for further study, such as a masters course. Requirements for masters courses are typically a 2.1 or higher from your undergraduate degree. Planning your own expedition provides you with skills that are relevant for master’s level study, such as experience with advanced equipment, perception of risks and hazards, problem solving and logistics. Having these skills will also enable you to plan future expeditions for your masters degree if you get the fieldwork bug!



Russell Glacier, Greenland. Source: R Carr (2015); Matterhorn, Switzerland. Source: R Carr (2005)





2. Project Development

Your dissertation preparation begins long before your third year and a large part of your project development will happen through the modules GEO2111 (human geography) and GEO2127 (physical geography). These modules will help you to develop your ideas through a series of lectures and seminars. You will also need to write your Dissertation Research Proposal (DRP), which allows you to plan out your project in detail.

Preparation for overseas project must begin much earlier than for projects primarily using secondary data. This is to factor in extra tasks, such as completing grant applications, budgeting, logistics planning, communicating with appropriate contacts and identifying country-specific risks and hazards. Below is a table of various project and academic deadlines that you should try to follow in order to organise a successful expedition.

Task	Month											
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Attend expedition meeting												
Decide on dissertation topic and location												
Discuss with appropriate staff members												
Create group and formulate aims and objectives												
Plan preliminary budget and identify grants to apply for and deadlines												
Write grant applications, risk assessments, request in-country contact references (as required)												
Winter exams (depending on module choice)												
Submit DRP												
Begin booking flights, accommodation, etc., as long as you are confident you will be able to financially meet your budget												
Submit Summer Research Plan (SRP)												
Summer exams (depending on module choice)												
Collect equipment from technicians (if necessary)												
Undertake fieldwork												
Write reports for funders as requested												
Begin dissertation write-up												

Table outlining expedition and academic deadlines.

The expedition will **not** be organised by the University as on previous field trips. While staff are able to advise, the project is your own, as are its successes and failures. Most of the information you need to organise a geographical expedition will be found in this guide. If you wish to consult a member of staff, it is useful to have a specific question in mind before meeting as this will focus the discussion and reduce time wastage.



2.1. Developing the Project

It is important to have a main focus or question you wish to answer for your dissertation. The sooner you decide on the specific topic, the sooner you can begin planning your expedition. If you are unsure about what to focus your dissertation on, try the following steps to choose a topic:

- Think about the aspects of your course that interest you the most, then look back through your lecture notes from previous and current modules. Also have a look at the module guides for your current modules to see what topics are coming up soon and might be of interest.
- Make a list of topics you like or don't like (e.g. glaciers, rivers, landslides), then the themes within these that you find most interesting (e.g. glacier hydrology, river aggradation).
- Select 4 – 5 themes you are most interested in and write out a series of questions that you think you could address, e.g. How does debris cover affect glaciers, or how have glaciers shrunk in Switzerland in the past 20 years?
- Think about what is plausible and spend a little bit of time (perhaps a few hours per topic) reading around the subject.
- Contact the relevant lecturer and ask to discuss your ideas. Try to collect your ideas into a list of points, rather than a generic email as you will get a much better response. Staff are generally very happy to help students who show enthusiasm for their area. Staff can then help you determine what is and is not achievable, in terms of methods, project focus and location.
- Think about where you could do the project and where you want to do it. For example, you can measure glacier melt in the Swiss Alps and Greenland, so where do you want to go?
- Once you have your idea, read up on potential site(s), areas of research and field techniques as this may help to focus your idea or see which methods will be applicable in your field site. A very good place to start is Hubbard and Glasser (2005) *Field techniques in glaciology and glacial geomorphology*. Chichester: John Wiley & Sons, Ltd.
- Find yourself a group! You can't go by yourself, so there's a couple of ways to do this. There will be an expedition meeting in November to allow enthusiastic geography students to meet others who wish to do a similar project or go to the same area. You could also find similarly-minded students from your course by yourself. Generally, it is a good idea to ask relevant staff members as they may know of other students planning similar projects.





2.2. Project Development as a Group

It is important to note that you will need to work as a group during your expedition, but your dissertations **MUST** be individual projects. In reality, this means that you can collect data together and even use some of the same datasets, but the focus of the analysis must be different. Your project must also be unique to you and cannot be an exact repeat of previous work, including other dissertations and published studies.

You may need to collect data together in certain situations (e.g. you cannot walk around on a glacier alone), so the group will need to think carefully about which datasets need to be collected, how frequently this needs to be done and how you can ensure that everyone gets the data they need. For example, a group may collect data on glacier melt, air temperatures, debris cover and proglacial stream discharge. The individual projects can use these datasets, but focus on different aspects: the impact of debris cover on glacier melt; the spatial and temporal variability in glacier melt rates, in relation to air temperatures; and diurnal variations in proglacial stream discharge and how these relate to glacier melt. Often, the most successful projects have a common, over-arching aim (e.g. understanding a particular glacier) and collect a series of datasets that can be combined for each project. This is often more efficient than each person collecting several datasets for their own use. As a result, it very much helps if you can find people with similar interests and plan your projects and data collection together from the start. It is also beneficial to set out what each person will use at the start, to avoid any confusion or issues with project overlap.



Longyearbyen, Svalbard. Source: Svalbard team (2016); Russell Glacier, central-west Greenland. Source: R Carr (2015); South Annapurna Glacier, Nepal. Source: R Carr (2016)

2.3. Key Academic Milestones

As stated in the introduction, there are numerous reasons to choose to embark on an expedition, although it is primarily driven by the need for information for your dissertation. There are a number of other assignments that you will need to prepare for this year, starting before Easter, which are mandatory for your GEO2111 (human geography) and GEO2127 (physical geography) module and continue through to your dissertation (GEO3099).



2.3.1. Dissertation Research Proposal

Before Easter, all second year geography students are required to complete a 2,400-word Dissertation Research Proposal (DRP), which is a very thorough research plan that includes aims, objectives, literature review, methodology, required resources, a reference list and a signed risk assessment (further guidance on risk assessments can be found in Section 10.2 of this booklet). Physical geographers will also be required to complete a Dissertation Field and Lab Form, which involves indicating what equipment they will need for their expedition. This counts as 60% of your GEO2111 or GEO2127 module.

2.3.2. Summer Research Plan

After the Easter holidays you will find out which dissertation mentor you have been assigned depending on the connections between your chosen topic and their area of expertise. They are there to offer advice on appropriate methods and sources, as well as refining your overall project. You need to go prepared to all mentor meetings so that you can maximise your one-on-one time. Your dissertation mentor will go through your DRP with you and suggest improvements, which you will then use to complete your Summer Research Plan (SRP) before the end of term. Those completing research abroad will need to attach several other documents to the SRP, namely Foreign and Commonwealth Office (FCO) advice on the country you are travelling to and proof of insurance from the Newcastle University Insurance Office (insurance@ncl.ac.uk). Risk assessments and permissions to foreign countries must also be signed by the Head of Geography.

2.3.3. Dissertation

During your third year, you will write a 10,000-word dissertation that counts as 22% of your degree, the equivalent of two third year modules. This means that you will be spending a lot of time and effort on a project of your choosing, so why not go abroad? There are a lot of physical features and human interactions that may not be present in the UK, such as glaciers or coral reefs. The more interested you are in a topic, the more work you are likely to put in and you might achieve a higher grade because of it.

It is highly recommended that all fieldwork for GEO3099 is completed within the summer period between Stage 2 and 3, especially if you are considering doing your research abroad, as returning to the study site may not be possible. If you are collecting data in the UK, returning to the study site is more achievable however it is inadvisable to miss lectures during your third year and it will be hard to juggle data collection with your other coursework and contact hours.



3. Expedition Location, Timing and Format

There are many different factors to consider when deciding on your project location, including cost, time, remoteness and logistics. However, the most important factor is whether you can address the aims and objectives your project at your chosen study site. In the end, the focus of the expedition is your dissertation work. However, you may well find that you can successfully complete your project at a number of locations, in which case you can consider other factors, including where in the world you would like to visit!

3.1. Choosing Location

It is important to find a balance between practicality and ambition. For example, it is not practical to plan an expedition to the Antarctic, however you could plan a project in an ambitious location, such as Greenland, Svalbard or Chile. It is worth weighing up your motivation, reason for choosing a particular location and sense of adventure against time of preparation, effort required for in the field and added cost of travelling further away. The more remote the location (either in terms of physical distance and/or culture), the more time, effort and money you will need to invest. Before you invest a lot of time in a project, you should think honestly about where you sit on this range between practicality and ambition. This will vary for each person and you will want to find a group who have a similar view. You may wish to think of a Plan B, if expedition funding is the only way you can afford to go to certain locations, in case you are not able to raise sufficient funds.

If you are completing an overseas dissertation, you are likely to encounter a language barrier if you are not a speaker of the native language. It is highly advisable to learn the language before going to the country as you will need the basics as soon as you land, e.g. ordering a taxi to your accommodation, asking the price of the bus fare. Remember that you are in a different country, with different culture norms and different laws, so try to avoid offending the local people. Try to research this from reliable sources in advance and contact any staff members who have been to the location before. Working at sites where staff have previously and/or currently worked means that you can gain a lot of prior knowledge on the site.



Monta Rosa Massif, Switzerland. Source: R Carr (2005); Russell Glacier, central-west Greenland. Source: R Carr (2015); Calbuco volcano, Chile. Source: A McKee (2016)

3.2. The Right Price

When planning an expedition abroad or in the UK, it is essential to think of the cost. Calculate a preliminary budget to decide on 'fixed' (e.g. international flights) and 'adjustable' (e.g. food, consumables) costs, using the example budget in Section 5. If you are considering an overseas expedition, you are very likely to need a larger budget for travel costs. To help with the costs, you should strongly consider applying for funding from grant organisations, such as the Newcastle Expeditions Committee, or the Royal Geographical Society (with IBG) (further grant information can be found in Section 11 of this Handbook). Applications for grants have early deadlines, e.g. 30th January for the Royal Geographical Society (RGS) Geographical Fieldwork Grant. Early preparation is key for success, and may make the difference between your expedition going ahead or not. The amount awarded by the organisations can vary considerably. The maximum award values are given in Section 11, but be aware that you may not get the amount requested. Well thought-out and well written proposals are much more likely to get the full funding, which is another good reason to start your preparations early.

Overall, you should determine how much funding you can obtain if all of your grants are successful and the cost of the trip. You should then decide in advance how much personal contribution you are prepared to make. This will give you a series of thresholds (e.g. you may decide that the trip can go ahead as planned if you are up to £500 short, but would be cancelled if you are more than £1,000 short). These decisions are up to the individual and the group and it can be uncomfortable to discuss the financial aspects, but this should be done at the beginning to avoid any tricky circumstances, once you have invested a lot of time and effort in planning your project. It will also make waiting for the grant decisions a little less stressful, as you have a back-up plan.

3.3. Contacts

You should think about in-country contacts when deciding on a location. This is essential for some grant applications as they require an in-country signature for all overseas expeditions, although the importance varies between location. Local contacts are also a great source of information about the area and perhaps about the topic you are studying, and can provide guidance about places to stay, cultural differences and appropriate methods. Some contacts may also be able to supply equipment or resources, which can save a lot of money on excess baggage. Talk to your mentor or dissertation supervisor to see whether they have any contacts in the locality. It can be helpful to choose a location where a member of staff has been previously, as they can give you important information about the country or field site, as well as potential data sets, etc.

If you are applying for grants to cover the cost of the expedition (see Section 11), you may be asked to provide a reference from your in-country contact. Ask if they are willing to write a reference, but if they do not have

enough time in their schedule, do not speak the language, or are unwilling, try to find another contact who is prepared to do so. Alternatively, the contact may be more willing if your mentor drafts the reference first. Discussing the issue with your mentor is a good way of deciding how to proceed and potentially finding an alternative contact. You must include an in-country contact for overseas dissertations when completing the Newcastle University Risk Assessment, which is included in the Dissertation Research Proposal (DRP).

It is important to communicate with your contacts in a polite, professional and formal manner, as if you were contacting a member of staff. Talk to your mentor first, and see if they will make the first contact, as it will probably increase the chance of getting a positive response. Do not harass your contacts with numerous emails: stick to the facts, explain who you are, what you aim to do and why you are contacting them. Keep communications to the point and clear. Otherwise you may not get a positive reply or any at all. If you are unsure at all, talk to your mentor about how to talk to external contacts BEFORE emailing them: it is much better to do this than annoy the contact.

If you wish to connect with Newcastle University alumni who may be particularly knowledgeable in your research topic, or who are now living in the area you wish to study, you can contact Anna Warren, the Advancement Officer (Alumni Engagement) at anna.warren2@ncl.ac.uk. Alternatively, you can visit the Newcastle University LinkedIn page at <https://www.linkedin.com/company/newcastle-university>. By creating a LinkedIn account, you can use the alumni tool to search for alumni living or working in certain places or for certain companies which may then help you on your expedition.

3.4. Travel Agents or Organised Expedition

Some organisations are able to provide the basic logistical support, which can cost extra but may be necessary. For example, previous expeditions to Kangerlugssuaq, Greenland, have used the company World of Greenland – Arctic Circle (WOGAC) to organise transport to the field site, generators and equipment delivery. In cases such as this, external logistical support is necessary for the expedition and can work out cheaper in the long run (e.g. the cost of a lift to the field site may be much less than hiring a vehicle for the entire expedition). Travel agents, such as STA, Trailfinders and Dawson & Sanderson Travel Agents in Newcastle, will be able to find flights and hotels quickly however commission charges may add up to be more expensive than booking it yourself.

Choosing to book your expedition through an organisation, such as Frontier, Oyster or Gap Work, may not be ideal for your own research purposes, as some grant organisations specifically refuse expeditions which are

organised through the commercial expedition or adventure sector, such as the Newcastle Expeditions Committee. Individuals are also usually required to pay a substantial fee to join organised trips. These organisations should therefore be treated very cautiously, as they are aiming to make a profit, and any such plans should first be discussed with your mentor.

3.5. Timing

When to go?

You should aim to collect your data during the summer between Stage 2 and Stage 3. It is not advisable to miss lectures at Stage 3 in order to complete research, as this may impact your final degree result. Instead, plan ahead and do research when you are more likely to be available. You may need to juggle your trip with other commitments, such as jobs or internships, but the summer should be long enough for both.

Remember that weather and the seasons have a major impact on accessibility to particular research topics. Look up usual weather and opening times to avoid logistical issues, e.g. National Parks closing in certain seasons, rivers being too rapid to study, etc. You also need to ensure that the weather will be good enough for you to conduct your work. In Greenland, for example, you need to go during the summer, so that it is warm enough, but also avoid June, due to the mosquitoes! If you are travelling to the Southern hemisphere, remember that our summer will be their winter.

How long for?

This fundamentally depends on your research question and also how remote your site is, e.g. there is no point in going to Greenland for a week. Usually overseas research should last between 3 – 4 weeks to gather enough information and sometimes funders have specific limits for field work duration, such as the RGS Geographical Fieldwork Grant, which specifies 30 days.

In reality, this 30-day limit is a little flexible, so that 28 days is OK, but 5 days would not be. As the expedition is principally aimed at collected primary data for your own dissertation, it is up to you to decide on the duration of fieldwork. For example, if you are measuring melt on a glacier melting at 1cm per day, you won't see much change over a week, and if you want to look at seasonal changes, a few days won't allow you to do it. However, if you are gauging a proglacial stream every hour to look at short-term discharge variations in melt, then you should get useful data over the course of a week. Generally, higher frequency data generally means a short time period, although this is determined by your research question and the temporal resolution of data you

need to address it. Also remember that you need to balance your data collection needs with those of the rest of the group, who may need a longer time period for data collection.



Mueller Glacier, Mount Cook Region, New Zealand. Source: R Carr (2014)

4. Teamwork

It is advisable to create groups for expeditions as soon as possible to begin organisation. Most grant bodies require a minimum of three people in a team to ensure safety while completing fieldwork. Ways to form a group include:

- Attending the expedition meeting in November where you can meet other geography students who are interested in participating in an expedition.
- Speaking to a relevant member of staff who can put you in contact with students thinking of a similar dissertation topic or geographic location.
- Ask other students in relevant lectures who may be considering organising and/or joining an expedition.

If you wish to complete your research individually, you can do so, provided that you have good overseas contacts and arrangements in place. You **cannot work alone** in the field due to many potential risks, but you can ask a family member or friend to participate. If you do this, you need to think carefully about things such as insurance for individuals who are not members of Newcastle University. Please note that these individuals may also not be eligible for some external sources of funding, such as the RGS Geographical Fieldwork Grant.

4.1. Working as Part of a Team

Once you have assembled a team, it is advisable to meet up regularly to begin organising your expedition. The time between forming a group and the first funding deadline is short, so it is advisable to meet regularly, to ensure you make progress with developing the ideas. Communication is vital at every stage of the expedition, so it is a good idea to set up a group communication forum, e.g. WhatsApp, so that minor queries can be discussed. Avoid making all meetings online, as it can be much easier to resolve issues face-to-face and it encourages team bonding and positivity.

Your first task as a group will be to ensure that everyone has a clear research aim, then build individual objectives around these aims. You need to ensure that these aims can be addressed at the proposed study site. Some team members may have slightly different study sites, such as a neighbouring glacier, but think carefully about travel times and logistics, especially if you need to make repeat measurements.



Logistics and budget planning come hand-in-hand. You must now think of how you will get to your site, where you will stay, what you will eat, what equipment you will need and how the equipment will get there, e.g. borrowed from contacts or paying for extra baggage allowance. See Section 5 to see an example budget and think about what needs to be included in your budget.

As a group, you may wish to ascribe certain titles to each member in the group (some grant organisations ask for these), e.g. logistics coordinator, finance manager, team leader or you may wish to remain non-descript. Think about whether you want a designated team leader. Sometimes this works well, as it means that one person has the overview of the organisation and planning, but other times it is better to have different people responsible for different elements. This will depend on the group dynamics, but the key thing is that people take responsibility for the different aspects (e.g. writing a particular grant) and that progress is monitored, to avoid missing grant deadlines or forgetting equipment. Being well-organised and good communication are key. Roles may change during the planning, and especially during the expedition. You may want to assign certain tasks to certain team members, e.g. budget management. Try not to get too caught up with 'roles' and focus more on the tasks that need doing. Delegate tasks to all members of the group so that everyone is equally responsible for the success of the team, both during the grant application and planning stage as well as in the field. The work divisions may differ markedly between these two phases and should play to people's strengths.

Being open about workloads at this stage will ease tensions, especially with approaching deadlines. For this reason, it's best to set out everything that needs to be done and assign tasks. This will allow everyone to see what needs to be done, that you are making progress and whether the workload is being spread evenly between the group.



Longyearbyen. Source: Team Svalbard (2016); Calbuco volcano, Chile. Source: Team Chile (2016)

4.2. Resolving Conflict

Sometimes conflict can develop within teams, for example, if people feel that workloads are uneven or disagreements about practicalities, such as accommodation. Lack of familiarity with group members and your field site(s) during research, combined with stressful situations, can create tensions that can escalate if not resolved quickly. Understanding and appreciation are key in constructively resolving conflict. Sometimes a group leader can quickly resolve issues and choose the right course of action, however the decision should be agreed upon by all or the majority of the team.

Suggestions on resolving conflict:

- Be open and express any concerns immediately.
- Do not let conflict get personal – deal with facts and issues, not personalities.
- Focus on things you can resolve (e.g. moving to a more sheltered camping spot), not those you can't (e.g. bad weather).
- Do not look for blame.
- Keep team issues within the team – talking outside of the group allows conflict to build without directly dealing with the issue.
- If you feel angry, walk away, calm down and come back. In the field, make sure to give each other space.
- Try to refocus on what is really important and what you can put up with.
- In advance of the trip, take time to get to know your group members.



5. Finance and Budgeting

5.1. What to Include

The budget is the cornerstone of any expedition. It is important to identify ‘fixed costs’, such as international flights, and ‘adjustable costs’, such as food, to create a first draft of the budget. If your income does not cover your expenditure, consider alternatives such as reducing the duration of stay, staying closer to the study site, choosing cheaper accommodation, making own meals every day, etc. Remember that your safety and the safety of your fellow team members comes first – do not cut costs where safety is concerned, such as First Aid training, vaccinations and insurance. Similarly, do not cut food costs too far. You are likely to need many more calories in the field than at home, as you will be doing a lot of exercise. However, you may be able to save costs, e.g. by cooking rather than eating out.

If you are working in conjunction with the host country, you may have to include an amount for host country participants, such as trekking guides, translators, borrowing equipment, etc. Find out and budget for these expenses before you leave on your expedition as it may be an unexpected drain on resources. Keep in mind that some equipment may be too heavy to be transported by air and it is important to check the luggage allowances and costs of excess baggage before you travel. Some equipment may not be permitted through airport security, such as petrol generators, although some equipment may be dangerous to buy in certain countries, e.g. gas canisters without the correct fitting. It may be cheaper to hire equipment rather than ship it out, although this depends on the equipment you require and the duration of fieldwork. Many pieces of equipment use LiPo batteries: there are very specific rules for carrying these batteries, so check with airlines in advance or you may arrive to find your batteries do not, or have a lengthy delay at security. Confirm with the airline whether they want these spare batteries in hand or hold luggage. When purchasing or hiring equipment abroad, always agree costs beforehand, to avoid any nasty surprises.

The budget will have to be readjusted numerous times over the course of the next few months. It is advisable to work out a minimum and maximum income from possible sources, balanced against minimum and maximum costs for the budget. It is important to think about what you will do if you do not get all of your external funding. Possible courses of action are:

- Make a personal contribution to the expedition. The amount each person is prepared to contribute is entirely up to them and it may vary between team members, depending on personal circumstances.



However, it should be discussed when you begin applying for grants, so that the situation is clear and people do not feel pressured to contribute more than they can afford.

- Alter your plans. You may be able to save costs by going into the field for a shorter time period, adjusting arrangements (e.g. camping, rather than staying in a hotel) and/or cutting out elements of the project (e.g. travelling to one glacier, not two). These changes should only be made if it is safe to do so and you need to ensure you can still address your project aim, even if you have to adjust it to fit within practical constraints. It is acceptable to adjust your project for practical reasons, but you should discuss it with your mentor before doing so.
- Change the expedition location. You may be able to address your original aim or objectives in another, cheaper location. You should talk to your mentor before doing this. If you already have some funding, the funder MAY allow you to change location, although you must check their rules on doing so. It may be that they will allow it, but only if you contact them in advance and provide a suitable reason.
- Cancel the expedition. This is the most extreme measure and should not happen if you begin your grant applications early enough, engage with the project and talk to relevant staff members.

It is likely that international travel will be the greatest drain on expenses, followed by accommodation then food. Please note that some grant bodies specifically request that the 'cheapest method of transport' is used and you can only pay for economy class tickets, so unfortunately no business class! Personal equipment, such as rucksacks, dry liners, suitable clothing may have to be purchased at a personal cost, although sometimes you can cost it into the grant, if it's something you wouldn't usually use, e.g. a down jacket. Many outdoor clothing companies offer discounts, or occasionally even free products to worthy student expeditions to promote their brand. It may be worthwhile contacting certain companies to explain what you are doing and promising to send inspiring photos of their product in use in return for a discount. Make use of your student card and talk to the staff in the outdoor stores about your project: they may be able to offer an additional discount.

The Newcastle University Geography technicians can provide some safety equipment for free (first aid kits, emergency shelters, walkie talkies), however further safety or comfort items may have to be purchased or hired, e.g. satellite phone with appropriate SIM card for emergencies, thermal flasks, etc. Costs for official documentation can be included in the budget, such as visas or passport renewal. Some consumables, such as sediment bags, can be attained from technicians. Preparation of project expenses are included in some budgets for printing, binding and posting. However, if the report is required in email form, then the cost will

be £0. Medical costs (e.g. vaccinations) can also be included, which will vary depending on which vaccinations are advised for the country you will be travelling to. If training is necessary, add this to the budget, such as First Aid Training or equipment training.

5.2. Contingencies

Make sure to budget for contingencies, usually 10% of the overall cost. Contingencies are events that could happen but you may not plan for them, e.g. inflation of the cost of flights, flight is delayed and you have to book accommodation for an extra night. It is important to set aside extra money for these kind of events and most grant applications will require you to add a contingency to your budget.

5.3. Managing Finances

It is advisable to set up an expedition account, preferably jointly with other team members, and with a separate card for transparency, ease of payment and keeping track of funds. Some funders request this, e.g. Gilchrist Educational Trust. If successful, grant organisations will usually ask for your account details to transfer the award money into, so make sure to set one up before this happens. It is possible to set up an account within a day at most local bank branches. Call in or phone Santander in the Students Union to make an appointment and they will let you know what to bring to set up the account. Please note that poor expedition finance management can have an effect on your future finances as banks may have to check your financial record before approving a loan. It is therefore important to ensure that you do not go overdrawn on your account. Also watch out for overseas transaction charges, if you use the account card when you are abroad.

Some grant organisations may ask for a record of your finances, so try to keep all receipts (including email receipts) of expedition-related expenditure. As part of a thorough report upon your return from the expedition, some organisations ask for your final finance record, i.e. incomings and outgoings, money spent during the expedition, etc. This is good practise for similar work in the future and also allows for transparency within the team.

It is important to know how much money is in the account at all times, so as to avoid cheques bouncing or going into the 'red'. One option is to make one person responsible for finances. This does not, however, mean that other team members should be ignorant of the actual amount of money available. Carry sufficient but not excessive amounts of cash to your field site and around the local community. Remember to bring contingency cash in case of emergency, including medical emergency in countries where treatment is not free. Remember that you may seem wealthy to others, so be wary of theft and try not to show your entire field

budget at once. Instead, only have what you need in the near future in the wallet/purse you are actively using and store other money securely. It is advisable to keep money in separate places, e.g. separate wallets held by different people, in case one is stolen.

Further advice on finances and budgeting:

- Shop around to get the best exchange rate when changing your money into the local currency.
- Your bank or the Post Office should have a variety of currencies in stock, however you may need to order less common currencies which can take up to two weeks.
- Research the types of payment that can be made at the places you will be visiting, e.g. do they accept card or cash only as this will impact how much money you bring with you.
- If you can, it is helpful to pay bills in advance, so that you know they are sorted and you need to carry less cash, e.g. paying for hotels or transport.
- Remember to update your card provider to let them know where you will be and when. Some banks offer this service online. This can prevent expensive and frustrating situations if your card gets blocked while in a different country.
- Beware of scams at cash machines. Try to use well-known brands of ATM and use them indoors if possible. Check the cash machine before using it and avoid if you see anything suspicious, e.g. plastic in the card slot.
- Haggling is acceptable in some countries, such as Nepal where they will ask for many times the actual price. However, it may not be appropriate in other countries, e.g. Japan, so make sure you check the local customs before you go.
- Ensure that you know the exchange rate and approximate price of goods before you enter the country, in order to prevent inadvertently over spending.

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5.4. Example Budgets

The budget below was used for a **3-person**, month-long expedition to **Chile** to study a river affected by volcanic processes. The team stayed in B&B accommodation, all other meals were self-catered.

Incoming

The Newcastle University Expeditions Committee	£3,000.00
The Royal Geographical Society	£1,000.00
The Gilchrist Educational Trust	£1,000.00
Personal contributions (£1,103.55 each)	£3,310.65

Outgoings

UK Travel	
Flight	£166.98
Train	£61.30
International Travel	
International flights to Chile via Madrid	£2,782.53
Internal flights in Chile	£531.00
Travel in Chile	£286.89
Accommodation in Chile	£1,814.70
Food	£471.33
Equipment and Other	
Vaccinations	£540.00
Dry liner 60L	£13.99
Waterproof notepads	£36.51
Waterproof ponchos	£13.32
Map for project	£20.38
Personal Spending (some food, purchases and essentials, £600 each)	£1,800.00
Total	£8,310.65

The budget below was used for a **6-person**, 5-week expedition to **Svalbard**, Norway to study the effect of climate change on glaciers. The team stayed at University accommodation at UNIS, and self-catered their meals.

Incoming

The Newcastle University Expeditions Committee	£6,000.00
The Royal Geographical Society	£1,500.00
The Gino Watkins Memorial Fund	£2,000.00
The Andrew Croft Memorial Fund	£500.00
Personal contributions	£0.00

Outgoings

UK Travel	
Train (£56.80 each)	£341.00
International Travel	
International flights to Longyearbyen via Oslo	£2,400.00
Excess baggage (£50 per flight x 4 for 2 extra bags of equipment)	£200.00
Travel in Svalbard (£10 x 6 bus to and from airport, plus extra for taxis)	£150.00
Accommodation in Svalbard (£372 x 6 for one month's rent)	£2,232.00
Food (£437 x 6 based on the average living costs on UNIS website)	£2,622.00
Equipment and Other	
First Aid Training (join St Johns Ambulance Society at Newcastle University)	£30.00
Individual First Aid Kits	£60.00
Drone	£500.00
Post-fieldwork activities (RGS Event)	£200.00
Contingency (usually 10% of sub-total)	£873.50
Total	£9,608.5



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6. Equipment and Clothing

6.1. Weather Conditions and Equipment

Below shows various kit lists for different climates that you should consider when deciding on an expedition location. The main extreme weathers are included – hot, rainy and cold. Please note that the kit lists are not exhaustive and you will need to bring other items that are specific to you and your chosen climate. However, these lists are intended to give you a starting point for developing your own kit list.

Think about useful things to take, e.g. measuring tape, safety equipment (First Aid kit, survival bags, walkie talkies, high visibility jackets, flare, storm shelter), as well as more specialist equipment, but be aware of weight and luggage allowances. You can either take the equipment to the country with you, or borrow it from in-country contacts. If you are borrowing equipment from Newcastle University, you can complete an equipment list form (included in the Summer Research Plan), or contact the technicians directly (see Section 6.5). Make sure you know how everything works before you go and fully check **ALL** your equipment, ensuring everything is charged and has batteries. Also, think of backups if your equipment breaks. This becomes increasingly important the more remote you are.

Hot Conditions

Below is the kit list used for an expedition to the desert, daily temperatures roughly -5 to 50°C.

- 70 litre backpack
- 10 litre rucksack
- Laptop
- USB (large memory)
- Mobile phone
- Camera
- Adapter plug
- Device chargers
- Thermal under layers
- Very lightweight waterproofs
- Lightweight, flexible walking boots
- Cotton sun hat
- Large, loose overalls
- Field notebooks
- Walking boots
- Dry liners
- Correct currency
- Copy of insurance
- Letters of support
- Grant confirmation
- Itinerary
- Coolmax-rich trekking socks
- Loose fitting, well-ventilated clothing
- Multi-fuel stove
- Water bottle
- Torch
- Mini-flare
- Satellite phone
- Sun hat
- Sunglasses
- Sunscreen
- Long trousers and tops for women if travelling through certain countries



Cold/Wet Conditions

Below is the kit list used for an expedition to Chile during the southern hemisphere winter.

- 70 litre backpack
- 10 litre rucksack
- Laptop
- USB (large memory)
- Mobile phone
- Camera
- Adapter plug
- Multi socket plug
- Device chargers
- Field notebooks (x2)
- Sunglasses
- Warm hat
- Waterproof hat
- Grant confirmation
- External hard drive
- Merino wool under layers
- Down jacket
- Buff
- Waterproof gloves
- Warm mittens
- Trekking socks (x6)
- Walking boots
- Trainers
- Waterproof coat (x2)
- Waterproof trousers
- Waterproof poncho
- Down jacket
- Fleece (x3)
- Walking trousers (x2)
- Thermal under layers
- Watch
- Inner gloves
- Itinerary
- Crampons
- Passport
- Scanned copy of passport
- First Aid kit
- SPF 30
- Antibacterial hand gel
- Pencils, pens, sharpener
- Rucksack dry liners
- Windup torch
- Playing cards
- Thank You cards
- Waterproof phone case
- Currency (Euros and Chilean Pesos)
- Copy of insurance
- Letters of support



Expedition kit. Source: J Linighan (2016)

The RGS Expedition Handbook contains a variety of advice on expedition location logistics, such as mountaineering and trekking expeditions, desert, tropical forest, polar, underwater and caving expeditions:

<http://www.rgs.org/OurWork/Publications/EAC+publications/Expedition+Handbook/Expedition+logistics.htm>.



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6.2. Using equipment

It is a good idea to know what is available before you plan your research project, as this may lead to disappointment if the equipment is not available. There are alternatives, such as borrowing from a different School, University or from contacts. You may consider hiring equipment to prevent disappointment. The following equipment is available from the Newcastle University Geography technicians.

Safety Equipment:

- Chest Waders
- Ear protectors
- Face masks
- Wellies
- First aid kits
- Gloves
- Googles
- Hard hats
- Survival shelter
- Waders

Field Equipment:

- Abney level
- Anemometer Thermo
- Aquascope
- Automatic level
- Bamboo stakes
- Clino compass
- Depth finder
- Digital thermometer
- Earth thermometer
- FHT Hemispheres
- Flow meter
- Gauntlets
- Geological hammer
- GPS- eTrex 10
- Hammer
- Invertebrates bottles
- Kick net
- Laser range finder
- Quadrants 50x50
- Range poles
- Rod - non-threaded
- Rod - threaded
- Rod set - peat depth
- Square soil samplers
- Stakes – metal
- Mallet
- Measuring staffs
- Measuring tapes-30m
- Measuring tapes-50m
- Measuring tapes-5m
- Mini prism
- Mortar (medium and large)
- Penetrometer
- Pocket Penetrometer
- Pocket vane tester
- Pointing trowel (small, medium and large)
- Prism pole
- Round-edge trowel
- Russian auger - non-threaded - L: 50cm D: 60mm
- Russian auger - non-threaded - large
- Russian auger - threaded - L: 50cm D: 60mm
- Sample bottles - 250ml
- Tripods
- Sample bottles - 500ml
- Sample bottles - diatom
- Sand auger - twist end
- Schmidt-hammer
- Screw auger
- Shovels
- Sieves
- Sledgehammers
- Snake bite kits
- Soil auger - L: 50cm D: 20mm
- Soil auger - L: 50cm D: 60mm
- Soil auger - long small diameter
- Soil auger - long std. diameter
- Spades
- Spring balance 10 kg
- Spring balance 1kg
- Spring balance 5kg
- Vernier callipers
- Wood Stakes
- Straight edge trowel



Laboratory Equipment:

- AAS
- Balances
- Centrifuge
- Conductivity meter
- DO Meters
- Finipipette (0.5-5ML)
- Finipipette (100-1000UL)
- Finipipette (30-300UL)
- Finipipettes (10ml)
- Fluorescence Spectrophotometer
- Freeze Dryer
- Fume Hoods
- Furnaces
- HACH Portable Spectrophotometer
- Hotplates
- HPLC
- Magnetic Stirrer
- Microscope LED Lights
- Microscopes - Compound
- Microscopes - dissecting
- Spectrophotometer
- Titrator – digital
- TOC- Jenna Analytik
- Ultrameter
- Vacuum pump
- Vortex mixer
- pH meter
- Sedigraph
- Ovens



Sediment scales, oven and sediment sieve. Source: R Leitch (2016)

6.3. Collaboration and Communication with Technicians

Above is an extensive list of the safety, field and laboratory equipment that the geography technicians can provide. If you are taking the GEO2127 module, you will also need to complete a Field and Lab Equipment Form for your Summer Research Plan. Your dissertation mentor will then review your list of equipment, make amendments, then you may ‘book’ the equipment. The technician department operates a ‘first come, first served’ policy, so if you have not specifically requested an item, you may be disappointed if it is not available.

You will need to sign out equipment when you pick it up, and you must sign it in again once you return, otherwise you are liable for the equipment. The University’s insurance does cover lost equipment, but it is best to ensure you have packed all equipment before leaving your field site. Check **BEFORE YOU LEAVE UNI** that you have all necessary equipment and that it works – it would be disappointing to take the equipment to the study site and then find you are missing a vital piece.





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You can contact the physical geography technicians at physgeog-technicians@newcastle.ac.uk. Office hours are Monday – Friday 9am – 5pm.

6.4. Data Protocol and Management

Backing up data is extremely important for every project, no matter if the information is held on a laptop, camera or notepad. If any of these items are lost, stolen or damaged, you may lose all your work and it is unlikely you will be able to go back. If you are using electronic equipment for your expedition, e.g. GPS, download the data onto your computer every evening and check that it looks right, i.e. that it has recorded and that your points are in the correct places. If using notebooks in a rainy climate or near water, it is advisable to purchase waterproof notebooks as these will survive most weather and even submersion into rivers, preserving your research. Take pictures or transcribe your notes onto a computer regularly, then back up the data onto a USB or hard drive, so that if you lose your notebook, you still have the data. For added security, email the information to yourself or upload it to The Cloud if you have internet. Whatever data you collect, make sure you back it up regularly and to multiple places, and check that the data are recording properly if you are using equipment such as a GPS. You really do **not** want to spend eight months planning your work, and one month in the field, to lose all your research at the end. This would mean restarting your dissertation project from scratch and is an extremely bad place to find yourself.



7. Travel Arrangements

7.1. Flights and Getting to the Site

Organising and booking international flights will tie you to your plans, both financially and logistically as these are ‘fixed costs’ and are at scheduled times/dates. It is advisable to ensure that your transport or accommodation will be able to accept you when the flight lands, e.g. some services may not be available very late at night, such as hotel check-in unless alternative arrangements have been made.

It is advisable to leave a large enough gap between connecting flights, especially international flights, as delays could mean missed flights! Smaller airports are also more prone to alterations to flight departure times. The exact amount of time required between flights depend on a variety of factors, including the size of the airport, the country, whether you are using domestic or international service and the time of the flight. Check these things before you book your flight, to ensure you have enough time to make your connection.

Make sure to check baggage allowances before booking your flight as different airlines allow different baggage sizes (even sister companies, e.g. BA and Iberia). You need to think about how much personal luggage you will have and any equipment you need to transport. Consider splitting equipment between team members or borrowing/hiring equipment from in-country contacts. Also, bear in mind that if you book together, you can sometimes pool your luggage allowance, so that you have a set total weight between all bags, but this can be distributed between different bags and/or people. Note that, for health and safety reasons, most airlines will only allow each bag to weigh 32kg. Some airlines may suggest cargo shipping your heavy equipment bags but this is inadvisable as the equipment could be delayed or lost, or get held-up in customs, and this may jeopardise your fieldwork.

If you are taking large items of electrical equipment, e.g. dGPS, it is a good idea to create a document stating the name and serial number of the equipment, what it will be used for, and your contact details, including passport number (shown below). You should also consider attaining several letters of recommendation from your mentor and/or Head of Geography/School of GPS to ease your passage through security. Double check with airline about whether they want spare batteries in hold or hand luggage. Ensure that batteries in equipment are fully charged so that you can turn the equipment on, if airport staff request it. Take any delicate or expensive items in hand luggage and ensure that all equipment is packed securely and safely. In some countries, you may consider padlocking cases, in which case number combination padlocks are advisable, so that you don’t have the issue of losing the keys!





Flight to Chile. Source: A Russell (2016)

Once you have landed, getting to your study site may require the use of transport, perhaps by hired car, bus or taxi. Remember that some grant bodies request that you use the cheapest transport method possible, however safety must always take priority. It is advisable to research legitimate taxi companies before entering a vehicle. Ensure that the vehicle is licensed, that the seatbelts work, that there are no obvious faults with the vehicle and that the driver seems trustworthy. If in doubt, there is usually a kiosk at the airport that will guide you to a reputable taxi company.

It is advisable to create two letters detailing what you are bringing into and out of the country. An example of a letter stating what equipment is being brought into the country is shown on the next page. The document stating what you will bring out of the country should include specific details as well as their hazard properties, e.g. rock samples are less hazardous in terms of contamination from living organisms/bacteria than soil, which could affect whether you are permitted to enter/leave the country.





School of Geography, Politics and Sociology
Professor A E Gillespie
Head of School
Newcastle University
5th Floor Claremont Tower
Claremont Road
Newcastle upon Tyne
NE1 7RU United Kingdom

14th January, 2016

To whom it may concern,

Re: Scientific Equipment:

- Leica Controller Unit: (Equipment Number: 5798742; Serial Number: 2896773; Article Number 810855)
Leica Base Antennae: (Equipment Number: 5762634; Serial Number: 2870667; Article Number 807529)
Leica Rover Antennae: (Equipment Number: 5762635; Serial Number: 2870668; Article Number 807529)
Satel-TA-13 VHF radio + 2 Antennae: (Model: GFU27; Serial Number: 1351 00199; Article Number 767859)
Leica Surveying Tribrach: (Type GDF112-1; Article Number 798181)
Leica Surveying Antennae Pillar: (Type GRT146; Article Number 667216)
Leica Surveying tape measure: (Type GZS4-1; Article Number 667244)
Leica Battery Ni-MH: (Type GEB171; Article Number 727367)
Leica Radio bracket: (Type GHT58; Article Number 748417)
Leica Antennae bracket: (Type GAD108; Article Number 767790)
Leica Battery Charger: (Type GKL221; Serial Number 0085843; Article Number 733271)
6 x Leica Battery Li-Ion: (Type GEB212; Article Number 722806)
Bracket for survey pole: (Type GHT63; Article Number 767880)
Surveying Tripod: (Type Laser Alignment Inc. CTP103; Article Number 726833)
Leica Surveying pole: (Type GLS30; Article Number 752292)
Handheld laser range finder: (Type Lasertechnology Inc.; Serial Number 065436, July 2013)

The above scientific equipment will be used temporarily in the Puerto Montt area, Chile between January 16th and 27th, 2016 for a research project 'Causes, dynamics and impacts of lahars generated by the April, 2015 eruption of Calbuco volcano, Chile'. The equipment is owned by Newcastle University and will be returned to the UK on January 28th, 2016.

The research project is in collaboration with Dr. Claudio Meier (University of Concepción) and Andrés Rivera (Centro de Estudios Científicos), Valdivia.

Yours sincerely,

- Name
Course
Nationality
Passport Number
Telephone Number
Email Address



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FOR HIGHER AND FURTHER EDUCATION
2005



7.2 Travelling To and Within the Field Site

Think about travel to and around your field site in advance, including the practicalities of moving equipment. Remember that some grant organisations request that you use the cheapest method possible, however you should never compromise your safety or the public's safety. If hiring a vehicle, remember that some companies require the driver to be over a certain age and potentially have an International Driving Permit which may not be viable for some students, although this depends on the company and country you choose.

Travel within the field site greatly depends on the size and location of your study site(s) and will be integral to the way you plan your work. If there are certain areas of interest that are too far apart to walk, it is worth considering visiting several close-by areas in one day and visit the others on another day. Some areas are only accessible by foot, whereas some are only accessible by 4x4.



En route to Longyearbreen. Source: Team Svalbard (2016); En route to Rio Blanco. Source: Team Chile (2016)



8. Accommodation

8.1. Tents versus Buildings

Depending on your study site and budget, you may consider camping as an option for accommodation. Below are some of the benefits and negatives of each, which you should consider when deciding on accommodation.

Tents

- 
- Cheap
 - Proximity to site
 - Can move camp, and so access multiple field sites
 - More ambitious and remote locations
 - May allow you to stay in quiet and beautiful places

- 
- Electricity may be limited unless you hire a generator (expensive and may need to be shipped)
 - Need to gain permission to camp in some areas
 - Need to be aware of litter and waste
 - Subject to the elements and wildlife, e.g. mosquitos
 - May need to bring own food supplies and cooking equipment
 - Need to bring camping gear and potentially extra clothing

Buildings

- 
- Generally warmer than tents
 - Has electricity and maybe internet connection
 - May have restaurant/food shops nearby
 - Usually supply sleeping gear, e.g. pillows and blankets, as well as towels, etc.
 - Running water
 - More privacy
 - Lower risk from wildlife. May be essential in areas with dangerous animals, e.g. bears

- 
- Expensive
 - Usually further from field site(s)
 - May not come with own kitchen (more expensive to eat out every day)
 - Must be aware of other customers/roommates and security may be more problematic
 - May have to learn the local language



Longyearbyen. Source: Team Svalbard (2016); Bamboo, Annapurna Conservation Area, Nepal. Source: R Carr (2016); Camping at Russell Glacier, West Greenland. Source: J Linighan (2014); Quila Hostel, southern Chile. Source: Team Chile (2016)

8.2. Organising with External Organisations, including Universities

If you have organised part of your trip through an external organisation (e.g. World Of Greenland Arctic Circle (WOGAC) to organise transport to Kangerlugssuaq) it is up to you to ensure that all logistical aspects are covered. Check they are registered with the appropriate body (e.g. ATOL) so if it goes wrong, you get the money back. You must know flight times and numbers, terminals, connecting transport, accommodation check in and out times, whether your accommodation allows baggage storage, whether you may or may not take samples back to the UK with you or whether you will have to analyse samples while you are away.

It is useful to have an academic in-country contact, as they may be able to provide advice, equipment and useful information about the field site. They may also be knowledgeable about your particular dissertation focus, so they could provide a useful insight or theory about your particular phenomenon.

Sometimes your contacts will also be able to provide information which could aid the logistical planning of the project, for example, being able to suggest cheap accommodation that will suit your needs, or where the nearest bus stop is. Try to keep the balance between discovering useful information and being a nuisance to your contact, especially if some information is available online or in guide books about the area.



9. Health and Safety

9.1. Foreign and Commonwealth Office (FCO) Advice

As part of your preliminary planning, as well as the Risk Assessment, you will be required to check the FCO website (<https://www.gov.uk/foreign-travel-advice>). Familiarise yourself with some of the general threats but be particularly aware of specific threats near the areas you will travel to or through, including airports. Sign up for updates about your chosen country, as a warning may change during the planning process. Some grant bodies request that you send the most recent FCO advice along with your grant application, to ensure that the country is safe for travel.

If the FCO advises against travel, undergraduates will NOT be allowed to travel to the country. This is to ensure the safety of all expedition members. The warning will sometimes be lifted after a certain period of time. However, you should not rely on this happening before the time of your expedition. You will be required to send recent FCO advice to the Newcastle University technicians, within a week before travel to ensure that the advice is up-to-date and the country is safe for travel. It is therefore a very good idea to take into account the general safety of a country and/or region before deciding on your dissertation location.

9.2. Vaccinations

Ensure that you have all the appropriate vaccinations before leaving on your expedition. These will vary depending on the country and you need to check these before travel, for example, some countries require specific documentation to permit you to enter the country, such as a certificate of Yellow Fever vaccination. Check the Foreign and Commonwealth Office advice website (<https://www.gov.uk/foreign-travel-advice>) and the health website (<http://www.nhs.uk/conditions/Travel-immunisation/Pages/Introduction.aspx>) to see what vaccinations are recommended. Also, try and find out about risks from in-country contacts, e.g. large populations of stray dogs may require vaccination against rabies.

You should make an appointment via our GP surgery and they can advise on the appropriate vaccinations. Make sure to tell them the necessary details: where and when you will be travelling, including specific regions and any stop-over countries, as the advice will vary from place to place. It is important to ensure you have enough time to have the required vaccinations before travel and some vaccinations take several weeks to complete, so it is best to start early. Once the course of vaccinations is complete, you will be presented with evidence of which vaccinations you have received. You MUST take this with you while on fieldwork as if you are taken to hospital, you will need to present this to rule out certain risks or courses of action.



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9.3. Common Health Issues

As you will be completing fieldwork, you may potentially be staying at the study site for hours/days at a time which reduces your access to medical aid. It is advisable to know how to mitigate against common health issues associated with your study area, e.g. hypothermia in cold conditions, sunburn/sunstroke in hot conditions.

Visit the NHS website at <http://www.nhs.uk/pages/home.aspx> if you want to find out how to identify and mitigate against particular health risks while abroad.

You should consider gaining First Aid training, as this demonstrates your capability to conduct fieldwork safely and improves your knowledge of how to deal with injuries in the field. The Newcastle University Students Union runs a Heart Start First Aid Course.

Visit <https://www.nusu.co.uk/ents/event/2903/> to find out more.



10. Documents and Insurance

10.1. Visas and Passports

Check the **FCO website** (<https://www.gov.uk/foreign-travel-advice>) to find out whether you will require a visa to enter or leave the country you will be researching or even travelling through. If this is required, apply as soon as possible as visa permission may take a long time. Some countries allow you to apply for a 'fast track visa', although this is more expensive and cannot be guaranteed to arrive in short notice.

If you are participating in an overseas expedition, you will need a valid passport to travel. It is advisable to have an extra 6 months' validity on your passport if travelling outside of Europe, as this will prevent issues if your return is delayed extensively for any reason, e.g. hurricane, volcanic eruption. Some countries will only issue visas if you have six months or more remaining on your passport. Check the FCO website for this: go to 'Travel Advice', select your travel destination, then click 'Entry Requirements', which will show you some of the most important information about both passport validity and any further restrictions for entering the chosen country.

If you are applying for your first passport or renewing, this process can take up to 3 weeks. If you are renewing your passport, you will also need to complete a form from the Post Office, and attach an updated passport photo. This can be costly, however the cost can be included in the budget but do not expect donor organisations to cover the entire cost.

If you are travelling internationally, you may be given documents on board (e.g. landing cards) which you must complete in order to enter the country. You must give your name, nationality, passport number and address while in the country, as well as a declaration of goods. It is therefore important to have the details of where you are staying printed out and to hand.

Once you have reached your destination, and after your passport and Customs Declaration has been checked at security, you may be given immigration documentation that permits you to be in the country for a certain amount of time. Do NOT dispose of this document as it may prevent you from leaving the country without extensive security checks and/or interviews, which may mean you miss your flight.



10.2. Health Documentation

If travelling within Europe, bring your free **European Health Insurance Card (EHIC)** to access state-provided healthcare during a temporary stay in another European Economic Area (EEA) country or Switzerland. The EHIC covers treatment that is medically necessary until your planned return home. Treatment should be provided on the same basis as it would to a resident of that country, either at a reduced cost or, in many cases, for free. For example, in some countries, patients are expected to directly contribute a percentage towards the cost of their state-provided treatment. This is known as a patient co-payment. If you receive treatment under this type of healthcare system, you are expected to pay the same co-payment charge as a patient from that country. Wherever you are travelling, make sure you bring your record of travel vaccinations.

If you have a pre-existing medical condition, make sure you take enough medical supplies for the duration of your visit and any unexpected delays, as well as a stamped prescription. Medical supplies may be subject to supply constraints in some countries and in remote areas. Check the FCO Travel Aware webpage for more information: <https://www.gov.uk/travelaware>.

10.3. Risk Assessment

To be permitted to complete dissertation fieldwork by Newcastle University, you **must complete a risk assessment** document that identifies the hazards involved in your fieldwork and travelling to your field site(s). You must complete a risk assessment for your DRP and send an updated one to the School Safety Officers (Dr. Simon Drew, Lead Safety Officer, Dr. Bumni Eniola and Ana Contessa) at physgeog-technicians@newcastle.ac.uk the week prior to your expedition at the latest, however you may be required to complete one sooner by various grant bodies, as deadlines may be before the DRP is due. Without the risk assessment, you cannot get insurance, so it is crucial that you produce a comprehensive assessment in good time.

Most grant bodies request that you send a risk assessment or complete one of their own, following their preferred template, and may even decline your application if your risk assessment is unsatisfactory.

A **hazard** is a situation or set of circumstances that have the potential to cause harm, while the **risk** is the likelihood of harm potentially caused by a hazard. On an expedition, risk can never be completely eliminated, however you must try to avoid or mitigate it as far as possible.

When considering hazards, think of getting to and from your field site, weather conditions and location-specific risks, such as unstable river banks, uneven topography or even polar bear attack. To complete a thorough



analysis of potential risks, you will need to research your study site extensively, and know where you will stay, along with nearest hospitals, emergency contact numbers for the appropriate authorities and emergency insurance information. You must view your risk assessment as a working document, meaning that it will need constantly updated, even when in the field, to mitigate against risks and increase safety.

Remember that the hazards are specific to your study site and chosen country, so check the FCO website to see if there are any issues that you may need to mitigate against, e.g. earthquake, terrorist attack.

When completing the form, it is useful to think of five things for each section:

1. What is the hazard? E.g. cold, wet weather in the field.
2. What is the risk? E.g. risk of hypothermia.
3. Who is at risk and how? E.g. team members.
4. How can you mitigate against this? E.g. wear warm clothes (better to wear more thin layers than a couple of thick layers), bring full waterproofs, bring full set of dry clothes, emergency shelter and blankets, hand heaters or a cooking stove to make a warm drink.
5. What will you do if the risk has already happened? E.g. seek shelter in emergency storm shelter, change into dry set of clothes, use camping stove to make warm drink. Meanwhile use or call for transportation to return to accommodation. If hypothermia is severe, call emergency services or go directly to a hospital.

For more information on risk assessments, view the Risk Assessment and Crisis Management section of the RGS Expedition Handbook:

<http://www.rgs.org/NR/rdonlyres/24084ADC-C738-464C-A4D4-91F6CB4ED23E/0/HBSREracm.pdf>

For guidance on completing risk assessments from Newcastle University, search:

<http://www.ncl.ac.uk/ohss/safety/risk/travel/index.htm>

<http://www.ncl.ac.uk/ohss/assets/documents/SPS-Travel-Abroad.v2.pdf>.

Newcastle University will supply insurance for your expedition as long as you provide a signed, detailed risk assessment. The insurance policy does **not cover** 'bolt-on' tourist activities before or after expeditions, so you may have to acquire your own insurance for this. For more information on Newcastle University Insurance, visit: <http://www.ncl.ac.uk/ohss/safety/management/travel/>.



10.4. Control Measures

Control measures are the steps taken to mitigate or remove a particular risk. Some examples would be as follows:

- providing first-aid training before the expedition starts.
- getting immunised before exposure to disease.
- preventing bites by disease-transmitting insects.

In most cases, many control measures can be implemented before the expedition as part of the planning process. However, once the expedition or project actually starts there may be many more control measures to consider.

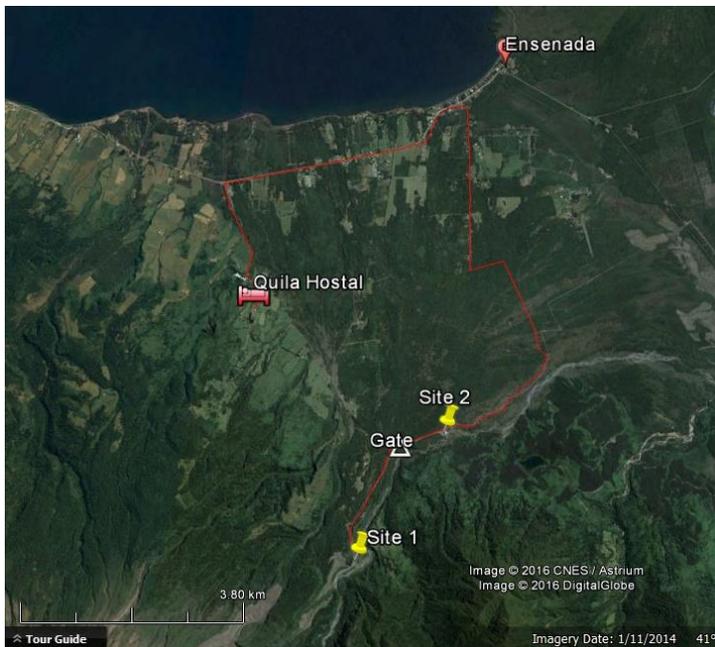


Safety training and rifle training. Source: Team Svalbard (2016)

Below is an **example** of a Risk Assessment submitted by the Chile Expedition Team (personal details have been blanked out).

Newcastle University Risk Assessment Chile Expedition

Note	Travelling without appropriate risk assessment may prejudice subsequent insurance claims.		
Project or Module Title	Study of fluvial and environmental processes affected by the 2015 Calbuco volcano eruption, Chile.		
Supervisor	Professor Andy Russell	Travellers	
School	Geography, Politics and Sociology	Unit	Geography
Travel dates	17 th July– 18 th August 2016	Date of assessment	6 th July 2016
Fieldwork Location	<p>Fieldwork will be carried out along the River Blanco, a river that drains the Calbuco volcano, which is located about 40km from Puerto Montt, the closest city and 30km from Ensenada, the closest town. There are many Cabañas and hamlets surrounding the volcano. The area is a popular tourist destination and the roads are well maintained. All fieldwork will be conducted in conjunction with Chilean authorities (National Emergency Agency ONEMI and the National Mining and Geology Service of Chile SERNAGEOMIN) ensuring safe access to field sites.</p> <p>Although there is currently no restriction on access to our planned field sites, we are contacting the owner of a local ranch who may be concerned as to our path through the Llanquihue National Park. We will exercise caution in accessing steep-sided river channels during periods of heavy rain in case of secondary rain-fall generated lahars or regular floods.</p>		





Emergency Contacts

Contact overseas	<p>Professor at the Institute of Conservation, Biodiversity and Territory, Universidad Austral de Chile – Providing equipment, laboratories, and advice Professor Andrés Iroumé Email:</p>	<p>Contributing writer for Lonely Planet – Providing advice and information about the area Carolyn McCarthy Mobile: USA home: Chile home: Email:</p>
Supervisor/Tutor	<p>Professor Andy Russell School of Geography, Politics & Sociology Newcastle University Newcastle upon Tyne NE1 7RU Tel.: E-mail:</p>	
Personal Contacts	<p>Parent Ad: Tel: Mob: Email:</p> <p>Parent Ad: Tel: Mob: Email:</p>	<p>Parent Ad: Tel: Mob: Email:</p> <p>Chilean Phone Tel:</p>
Accommodation	<p>Jul 18th – Aug 14th 2016 Quila Hostel Address: Casilla 731 Ensenada Ruta 225 KM 37, Puerto Varas, X Región, Chile Tel: (+56) 96760 7039 Email: contaco@quilahostal.coma</p> <p>Aug 16th – Aug 17th 2016 Hilton Garden Inn, Santiago Airport Address: Av. Américo Vespucio 1292, Santiago, Región Metropolitana, Chile Tel: (+56) 22964 1000</p>	<p>Aug 14th – Aug 16th 2016 Hostal Tótem Address: Hostal Totem, street Anwandter Carlos 425, Valdivia, Region de los Rios, Chile Tel: (+ 56) 63229 2849 Local number: 0203 564 6725 When abroad or from Chile: +44 20 3320 2609 Booking number: 236272386</p>
Emergency Services	<p>Police Emergency: 133 Ambulance: 131 Fire Brigade: 132 Services Information (Traffic, Car breakdowns, Police Station addresses, etc.): 139 Mountain Rescue (Cuerpo de Socorro Andino): 136</p>	
British Embassy	<p>Address: Avda. El Bosque Norte 0125, Las Condes, Santiago, Chile Tel: (+56) 22370 4100 Email: embsan@britemb.cl</p>	
Newcastle Insurance	<p>Kelly Lovelock – Insurance Officer Tel: 0191 222 6520 Email: Kelly.Lovelock@newcastle.ac.uk</p>	<p>Craig Langstaff – Insurance Assistant Tel: 0191 222 3913 Email: Craig.Langstaff@ncl.ac.uk</p>





	17 th August	12.00	Check out, take airport shuttle to Santiago Airport		
		12.25	Depart from Santiago, BA4250		
		06.20	Arrive at Madrid (Terminal 4S)		
	18 th August	08.45	Depart from Madrid (Terminal 4), BA7284		
		10.00	Arrive at London Gatwick (Terminal 5)		
Does this travel and activity present a significant risk to safety				Yes	No ✓
Hazard 1	Travel & Transport (Consider vehicles, roads, public transport)				
Risks	<ul style="list-style-type: none"> • Risk of road/air accident which could cause injuries or fatalities • Risk to students and public. 				
Control Measures	<ul style="list-style-type: none"> • Following the FCO and University guidance. • Itinerary planning to avoid travelling early in the morning or late at night. • Missed connections should be communicated to a UK and in-country contact. • Luggage will be kept close and monitored at all times. Employees will store luggage in appropriate locked facilities and check the luggage thoroughly on pick up. • Electronic copies or photocopies of passport to be held where required. • Little risk of air accident, however reputable airways will be used, e.g. Iberia and British Airways. • Check the airline's terms and conditions to see what is covered by delays, poor flying conditions, etc. • Pre-plan taxi shuttle with accommodation. Ensure that they offer a safe vehicle, e.g. seatbelts, no recent crashes, company is reputable, four-wheel drive, etc. • Accommodation is about 1 hour from the airport along a National Highway 225. • Once taxi arrives, check tires, seatbelts and driver ID. If driver is unsafe, e.g. drinking alcohol or talking on phone, request a different driver through accommodation or ask driver to pull over to talk on phone. • Use pre-booked taxi from reliable company to reach field site every day. Check same features for travel safety as to the accommodation. If the taxi is deemed unsafe, use a different taxi company. • Always use pre-planned routes and prepare alternatives. • Check weather forecast for hazardous driving before leaving, do not travel in extreme weather conditions (snow or ice). 				
Risks	<ul style="list-style-type: none"> • Risks of getting lost/stranded out in the field. • Risk to students. 				
Control Measures	<ul style="list-style-type: none"> • Always carry a map of the study area as well as road map. • Arrange a meeting point with transport contact. • Ensure that we have a working mobile phone with saved contacts. Check signal regularly. • Stick to designated routes and pathways where possible. • No lone working. Stay in the group of three to reduce risk to students. 				
Hazard 2	Accommodation (Consider security and fire safety standards)				
Risks	<ul style="list-style-type: none"> • Risk of theft and exposure to aggressive behaviour resulting in injury. • Risk of ill health, fires and smoke inhalation could result in burns and fatalities. • Risk to students and other accommodation users. 				
Control Measures	<ul style="list-style-type: none"> • Will use reputable accommodation. Also FCO and NU guidelines will be followed. • Valuables will not be left unattended and will be kept in available secure storage. • Maintain regular contact with accommodation owners prior to and during our stay. • Emergency evacuation procedures and routes of evacuation will be checked on arrival at the accommodation. • Will remain vigilant and cautious at all times when arriving, leaving and answering doors during our stay. • Will look at customer feedback from sites such as hotels.com and booking.com before booking the accommodation. 				
Hazard 3	Dealing with people and cultural differences (Consider safety in public places, culture, political issues, landowners, authorities)				
Risks	<ul style="list-style-type: none"> • Risk of confrontation with members of the public. • Misunderstanding of what our aims are, e.g. geology may sound like geography. 				



	<ul style="list-style-type: none"> • Risk to students and members of public.
Control Measures	<ul style="list-style-type: none"> • Plan routes in commonly used areas and avoid areas of concern. Maps will be used. • Be aware of crowded areas, opportunistic theft and cultural sensitivity. • Will travel in a group and will not split up. • Will not be out early in the morning or late at night. • Will not attend large demonstrations as they may turn aggressive or violent. • Hand out business cards which explain what we are doing and why in Spanish and English to promote understanding and awareness. •
Risks	<ul style="list-style-type: none"> • Risk of pick pocketing in tourist areas. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Be aware of crowded areas, opportunistic theft. • Be discrete about valuables, e.g. keep phones in bags, do not hand over excessive money when paying.
Hazard 4	Infections and health conditions (<i>Consider food, clean water, pests, immunizations, allergies.</i>)
Risks	<ul style="list-style-type: none"> • Risk of infection. • Risk to students and members of public if contagious.
Control Measures	<ul style="list-style-type: none"> • Wash hands regularly. • First aid kit and medication will be carried at all times. • Follow FCO advice on immunisation required –Hepatitis A, Tetanus, Hepatitis B, Typhoid and Rabies. • The Zika virus is not a risk for this location in Chile, nor for any of the team members. • If infected, seek medical attention immediately. Local clinic is 57 minutes away, closest hospital is 1 hour, 8 minutes away. • If bitten by dog, cat or bat, seek immediate medical attention in case of rabies. Vaccinations may be difficult to obtain quickly but are necessary within 24 hours of bite.
Risks	<ul style="list-style-type: none"> • Risk of dehydration and lethargy. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Buy bottled water. • Drink plenty of fluids. • Use rehydration tablets if severe.
Risks	<ul style="list-style-type: none"> • Risk of digestive/stomach conditions, e.g. diarrhoea, vomiting. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Food prone to contamination will be avoided, e.g. no shellfish to avoid 'Red Tide' events. • Food bought from reputable sellers or restaurants. • Have fluids readily available for rehydration. • If illnesses are unusual, e.g. not from food poisoning or other likely causes, then seek medical attention immediately.
Risks	<ul style="list-style-type: none"> • Pre-existing conditions made worse by weather or physical activities, etc. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • One member of the group has asthma, however it is mild and very well managed. • Inhalers will be brought along to every location. If breathing becomes more difficult due to climbing, we will take regular breaks, keep warm and return to a sheltered area if necessary. • Where prescriptive drugs are being taken, e.g. inhaler, a GP stamped prescription will be taken and made available on request.
Hazard 5	Extreme weather conditions (<i>Consider hot/cold/wet climates, hurricane season, etc.</i>)
Risks	<ul style="list-style-type: none"> • Hypothermia (due to cold/wet/windy conditions) and poor visibility leading to separation of team members. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Risk of varying weather due to the height differences of the surrounding topography. Also due to the fact it is the rainy season in August. • Will look at the weather on a daily basis. • Will bring and wear appropriate clothing and footwear. • High visibility jackets will be worn by all team members.



	<ul style="list-style-type: none"> • Carry emergency shelter
Risks	<ul style="list-style-type: none"> • Heat-related conditions by over exposure to sun. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Avoid sun stroke by wearing protective clothing, hats and sunglasses. • Drink plenty of water. • Use at least factor 30 sunscreen on skin every few hours.
Hazard 6	Fieldwork Activities: Slipping/falling
Risks	<ul style="list-style-type: none"> • Surfaces may be more slippery at higher elevations due to colder weather conditions as it is the Chilean winter. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Care to be taken when crossing slippery surfaces (crawl, link arms etc.), carry a safety rope. • If slips are becoming more frequent, stop and evaluate the path being taken – use a less slippery path if possible.
Risks	<ul style="list-style-type: none"> • Tripping, slipping or falling when taking measurements at the edge of the river • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Special care to be taken when holding large or heavy items to avoid falling. • Set large rucksacks away from the river before surveying. • Carry equipment in rucksacks so that hands are free to prevent falls.
Risks	<ul style="list-style-type: none"> • Immersion in cold water - cold-related illness/injury and drowning in meltwater-fed streams. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • We will not cross major rivers. If we need to cross very small cross streams caution will be stressed. Following the 'rule of 1' we will use waders to cross-small streams. • We will carry a full change of clothes in case of immersion in cold water as well as emergency foil blankets and emergency shelters. • We will also carry flasks of hot drinks for immediate warmth.
Risks	<ul style="list-style-type: none"> • Dropping or falling on equipment. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Keep equipment in rucksacks or bags to avoid dropping costly equipment. • Some equipment, e.g. sediment collector, is made of plastic and a glass film. This may break in the bag and cause harm to hands when removing the item. All team members will carry first aid kits with plasters and bandages, which are suitable for small wounds. Larger wounds which do not stop bleeding, must be held above the heart to stop blood flow. Immediate medical assistance is required.
Hazard 7	Fieldwork Activities: Unstable surfaces and geohazards
Risks	<ul style="list-style-type: none"> • Collapse of river embankment or cliff. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • If sites are too close to steep embankments, we will relocate. • Keep group at a safe distance from steep rock/sediment faces. • Do not approach if too dangerous.
Risks	<ul style="list-style-type: none"> • Falls into rivers or down steep slopes due to the failure of steep slopes. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • Keep a safe distance from potentially unstable river banks and cliff tops. Watch out for fractured ground. • Wear a hard hat when logging sedimentary sections.
Hazard 8	Fieldwork Activities: Remote working area
Risks	<ul style="list-style-type: none"> • Lack of medical attention. • Disorientation in field, cannot find way back. • Cannot find transport to take us to accommodation. • Risk to students.
Control Measures	<ul style="list-style-type: none"> • No one will split up from the group. All members carry a First Aid kit, suitable for most minor injuries. • A fully-charged mobile with Chilean SIM card and save contacts will be used in emergencies. Ambulance: 131, Fire Brigade: 132, Police: 133, Mountain Rescue: 136.



	<ul style="list-style-type: none"> • All members will carry a GPS, map, compass and whistle to locate themselves if requesting emergency services or locating other group members. • The closest clinic is 57 minutes by car, the closest hospital is 1 hour.
Risks	<ul style="list-style-type: none"> • Risk of injury when carrying heavy items such as sediment samples.
Control Measures	<ul style="list-style-type: none"> • Care when handling equipment. Ask for assistance in lifting heavy objects. • Take regular breaks so as not to strain muscles. • Pack samples into rucksacks if possible to reduce muscle strain.
Hazard 9	Specific FCO advice relating to this location
Risks	<ul style="list-style-type: none"> • Volcanic emergency. • Risk to students and public.
Control Measures	<ul style="list-style-type: none"> • As of 23rd June, a yellow warning was issued for Calbuco. This means the volcano is exhibiting signs of elevated unrest above known background levels. Currently no restrictions have been placed on the field site. If restrictions are enforced, these will be adhered to and precautions taken, such as evacuating the area if necessary. • Check the local and national news regularly for up-dates on the National Emergency Agency ONEMI as well as the National Mining and Geology Service of Chile web pages. Follow evacuation instructions issued to local population. Follow designated evacuation routes to vacate the area to a safe distance that will be confirmed by the authorities, expect heavy traffic and delays. • Keep emergency supplies in backpacks at all times, including food, water, first aid kit, passport, money, emergency contacts and emergency phone. If it is possible to return to the accommodation, take only essential items, including medical prescriptions. Turn off gas, electricity and water if possible. • Call home and in-country contacts using the emergency phone to reassure them of safety but do not use it again unless there is a life-threatening emergency.
Risks	<ul style="list-style-type: none"> • Earthquake. • Risk to students and public.
Control Measures	<ul style="list-style-type: none"> • Avoid buildings, especially unstable high rise buildings if in Santiago. • Keep emergency supplies in backpacks at all times, including food, water, first aid kit, passport, money, emergency contacts and emergency phone. If there is sufficient time beforehand, choose a safe space by identifying hazards and securing moveable items, then organise disaster supplies. • During the earthquake drop, cover and hold on. • Improve safety after the earthquake by evacuating if necessary, help the injured and prevent further injuries or damage. • Beware of aftershocks. • Restore daily life by repairing damage and reconnecting with the local community or accommodation owners. • Call home and in-country contact using the emergency phone to reassure them of safety but do not use it again unless there is a life-threatening emergency.
Risks	<ul style="list-style-type: none"> • Terrorism (occasional acts of domestic terrorism, usually in Santiago). • Risk to students and public.
Control Measures	<ul style="list-style-type: none"> • Keep bags with us at all times and report any suspicious behaviour to local authorities • Avoid areas that have a reputation for attacks, bad neighbourhoods • Before the event, choose a safe meeting point to congregate at if all members of the group are split up. • Remain calm and patient, listen to the radio or television for instructions. Follow the advice of local emergency officials. • If the event occurs nearby, check for injuries, give first aid and get help for those seriously injured. If this occurs at night, check for damage using a torch instead of a match or candle. Check for fires, fire hazards and physical hazards. • Check on accommodation owners. • If using roads to evacuate, expect heavy traffic and delays as some roads may be blocked for your safety. • Call home and in-country using the emergency phone to reassure them of safety but do not use it again unless there is a life-threatening emergency.





Volcanic Evacuation Plan

Volcanic Evacuation Plan
Pre-Preparation
<ul style="list-style-type: none"> • Torch and extra batteries • First aid kit • Emergency food and water • Essential medicines/prescriptions • Respiratory protection • Battery-powered radio <p>Exposure to ash can harm your health, particularly the respiratory tract. To protect ourselves while outdoors or cleaning up ash that has gotten indoors, use an N-95 disposable respirator (also known as an “air purifying respirator”). N-95 respirators can be purchased at businesses such as hardware stores. If you don’t have an N-95 respirator, you can protect yourself by using a nuisance dust mask as a last resort, but you should stay outdoors for only short periods while dust is falling. Nuisance dust masks can provide comfort and relief from exposure to relatively non-hazardous contaminants such as pollen, but they do not offer as much protection as an N-95 respirator.</p>
Preparing to Evacuate
<ul style="list-style-type: none"> • Tune in the radio or television for volcano updates. • Listen for disaster sirens and warning signals. • Review emergency plan and gather emergency supplies. Ensure at least a 1-week supply of prescription medications. • Make arrangements with Quila Hostal owners and Professor Iroumé for transportation, or follow authorities’ instructions on where to obtain transportation. • Fill water containers. • Fill sinks and bathtubs with water as an extra supply for washing. • Adjust the thermostat on refrigerators and freezers to the coolest possible temperature. If the power goes out, food will stay cooler longer. • Only 1 – 3mm of ash can significantly reduce visibility on roadways, and less than 1mm of ash will shut down an airport.
As you Evacuate
<ul style="list-style-type: none"> • Take only essential items, including at least a 1-week supply of prescription medications. • If you have time, turn off the gas, electricity, and water. • Disconnect appliances to reduce the likelihood of electrical shock when power is restored. • Follow designated evacuation routes—others may be blocked—and expect heavy traffic and delays. • Go to Valdivia as it is far enough away from the volcano, and our Chilean contact is there.
If you are told to take shelter where you are
<ul style="list-style-type: none"> • Keep listening to your radio or television until you are told all is safe or you are told to evacuate. Local authorities may evacuate specific areas at greatest risk in your community. • Close and lock all windows and outside doors. • Turn off all heating and air conditioning systems and fans. • Close the fireplace damper. • Organise emergency supplies and make sure household members know where the supplies are. • Make sure the radio is working. • Go to an interior room without windows that is above ground level. • Call your emergency contact from a hard-wired phone or mobile—a friend or family member who does not live near the volcano—and have the phone available if you need to report a life-threatening condition. Remember that telephone equipment may be overwhelmed or damaged during an emergency.



Approval

Travellers		
Name	Signature:	Date:
Mentor		
Name	Signature:	Date:
Head of Geography		
Name	Signature:	Date:
Review: When multiple field visits are planned, or changes made to the planned field visits, the RA will be reviewed and revised as necessary, then changes will be approved by a Mentor.		

10.5. Crisis Management Plan

This is a document that is designed to help you prepare for the worst-case scenario. Some grant organisations request that you send a Crisis Management Plan along with the grant application, so that they know you are prepared for any circumstance that is possible in your study location, e.g. volcanic eruption, terrorist attack. It is very important to plan this in advance, as you need to know what to do immediately, if a crisis does occur.

This document should not be very long, two A4 sides maximum and the information should be succinct and well thought-out. The Crisis Management Plan should include:

- immediate care of a casualty/casualties and other involved parties.
- evacuation to relevant medical care.
- revision of expedition logistics/objectives.
- communication with interested parties at home and overseas.
- monitoring of casualty/casualties in care.
- liaison with families/close relatives.
- liaison with insurers/assistance agencies.
- facility to supply information to authorities/media/public.
- follow-up and review.

An **example** is shown on the next page.



Newcastle University Chile Expedition Crisis Management Plan

Section 1: Crisis Scenarios

Situation: Volcanic Eruption	<i>Action:</i> Keep emergency supplies in backpacks at all times, including food, water, first aid kit, passport, money, emergency contacts and emergency phone. If it is possible to return to the accommodation, take only essential items, including medical prescriptions. Turn off gas, electricity and water if possible. Follow designated evacuation routes to vacate the area to a safe distance that will be confirmed by the authorities, expect heavy traffic and delays. Call families using the emergency phone to reassure them of your safety but do not use it again unless there is a life-threatening emergency.
Situation: Earthquake	<i>Action:</i> Keep emergency supplies in backpacks at all times, including food, water, first aid kit, passport, money, emergency contacts and emergency phone. If there is sufficient time beforehand, choose a safe space by identifying hazards and securing moveable items, then organise disaster supplies. During the earthquake drop, cover and hold on. Improve safety after the earthquake by evacuating if necessary, help the injured and prevent further injuries or damage. Beware of aftershocks. Restore daily life by repairing damage and reconnecting with the local community or accommodation owners. Call families using the emergency phone to reassure them of your safety but do not use it again unless there is a life-threatening emergency.
Situation: Terrorist Attack	<i>Action:</i> Before the event, choose a safe meeting point to congregate at if all members of the group are split up. Remain calm and patient, listen to the radio or television for instructions. Follow the advice of local emergency officials. If the event occurs nearby, check for injuries, give first aid and get help for those seriously injured. If this occurs at night, check for damage using a torch instead of a match or candle. Check for fires, fire hazards and physical hazards. Check for gas leaks, starting at the water heater. If there is a suspected gas leak, turn off the main gas valve, open windows and evacuate everyone outside quickly. Check on neighbors and accommodation owners. Call families using the emergency phone to reassure them of your safety but do not use it again unless there is a life-threatening emergency. If using roads to evacuate, expect heavy traffic and delays as some roads may be blocked for your safety.

In emergency scenarios where there is injury to person(s), the emergency phone will be used to contact the hospital. All expedition members will carry a copy of the crisis management plan and risk assessment, which will contain emergency contact details. Whilst waiting for the emergency services, first aid skills will be utilised immediately. All team members will also carry emergency supplies, e.g. first aid kit, map, etc.

Section 2: Emergency Contacts

British Embassy Santiago, Chile Address: Avda. El Bosque Norte 0125, Las Condes, Santiago, Chile Tel: 56 2 2370 4100 Emergency Tel: +562 2370 4100 Email: embsan@britemb.cl	Local Hospital, Puerto Varas Clínica Alemana Address: Dr Otto Bader 810, Puerto Varas, Llanquihue, Chile Emergency Tel: 56 65 2582290
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Emergency Services

Police Emergency: 133
 Ambulance: 131
 Fire Brigade: 132
 Services Information (Traffic, Car breakdowns, Police Station addresses, etc.): 139
 Mountain Rescue (Cuerpo de Socorro Andino): 136

Personal Contacts

Parents	Address:
	Tel:

11. Grant Applications

Depending on your research location and topic, you may consider applying for support from organisations or departments which provide funds and/or advice for a particular purpose, e.g. the Scott Polar Research Institute aims to enhance the understanding of the polar regions, therefore glacier-related research topics would be relevant. The support of external bodies can impact the success of your expedition as you are more likely to receive further funding if you have already been successful with certain grant bodies, e.g. the Royal Geographical Society (with IBG) is a prestigious organisation; support from them is highly sought after.

11.1. Advice on Applications

Start planning early!

After you have created or joined a group wanting to participate in an expedition, you can start searching for appropriate sources of funding. Find out what is required to apply, how much you could potentially receive, and, most importantly, **when the deadline is**. There is no point spending time and effort perfecting an application if the deadline has passed. You will also need to allow time for mentors to read drafts and referees to write references to support your work. Do **NOT** leave this to last minute and give academic staff as much notice as possible, otherwise they may not be able to support and assist with your application and you may not be able to submit it. You must get approval from the relevant staff member(s) before submitting any applications. Please note that individuals may not be able to apply for some sources of external funding which are only available to team expeditions, e.g. Royal Geographical Society.

Some grant bodies will require you to complete their own application form, which will normally be located on their website. If they do not request a specific template, include all the information that they would require to make an informed decision, e.g. aims, objectives, budget, consideration of hazards, etc. Word limits on some funding applications can make it difficult to include all the necessary information, particularly if there is more than one person in your team. Adhere to word limits by condensing information and including only the essential facts. If the grant body is interested in your project, they may request that you send more information after the initial application.

Certain funders may ask for extra documentation, such as a Risk Assessment, map of the study site(s) or a letter of recommendation from your referee. Some grant bodies will prefer your referee to send them their reference directly, however most applications prefer you to send all the documents at the one time, to reduce separation from the other documents and to reduce time spent reading separate emails/documents. Once



you have written one application, you will find it much easier to write subsequent ones, as you will have a lot of the basic material and ideas thought through, and it will also help substantially with your DRP and dissertation development. However, you should tailor each application to the funder and make sure you adhere to word counts, rather than simply copy and pasting.

11.2. Sources of Funding

Organisation	Description	Deadline
Newcastle Expeditions Committee	<p>Funds worthwhile, independent student-led research outside of the UK. http://www.ncl.ac.uk/students/wellbeing/finance/funding/ukstudents/expeditions/</p> <p>Three sources of funding available:</p> <ul style="list-style-type: none"> • Newcastle Expeditions Committee Funding (£1,000 - £6,000) • Harry Collinson Travel Scholarship (£250 - £1,000) <p>Restrictions:</p> <ul style="list-style-type: none"> • Destination must be appropriate and feasible. • The activities involved must be legal and safe. • The team from UK must have sufficient experience and can benefit from the expedition experience. • Any official permissions required have been actively sought. • People in the host country locality are willing to collaborate and are likely to benefit from the work done. 	Jan 2017
The Royal Geographical Society (with IBG)	<p>Supports UK led research teams carrying out geographical field research and exploration overseas. http://www.rgs.org/OurWork/Grants/Postgraduate+grants/Student+grants.htm</p> <p>Three sources of funding available:</p> <ul style="list-style-type: none"> • Geographical Fieldwork Grants (most applicable (£1,000+)) • Henrietta Hutton Research Grants (£500) • Monica Cole Research Grant (£1,000) <p>Restrictions for the Geographical Fieldwork Grants:</p> <ul style="list-style-type: none"> • Only supports groups (3 people or more). • Teams must be in the field for 30 days or more. • Preference will be given to research teams involving nationals from the host country • This grant is for independent groups. They will NOT support those joining a commercial expedition or pre-paid expedition, including organised charity fund-raising tours. • Two referee statements are required. • Some applicants will also be called for interview (usually these are held in March). 	Jan 2017

The Gino Watkins Memorial Fund	<p>Aims to inspire and guide enterprising, particularly young, people towards exploration and research in the polar regions (£2,000). http://www.spri.cam.ac.uk/about/funding/ginowatkins/</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A proper map must be supplied. • Two named referees required to send their references in sealed envelopes. • In assessing expeditions the Committee will take account of the proposed locality (grants are rarely given for non-polar or populous districts), the soundness of planning and objectives, and the likelihood of success. 	Jan 2017
Gilchrist Educational Trust	<p>Supports a number of British expeditions with teams of three or more proposing to carry out research of a scientific nature in another country. (£500 - £4,000). http://www.gilchristgrants.org.uk/</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • No organisations or groups which show evidence of party - political bias • No organisations or groups formed for medical purposes, unless there is a significant educational element in the proposal for which funds are sought • No organisations or groups seeking funds to help meet administrative or running costs • No organisations or groups seeking such a large sum that any contribution from this Trust would be a mere 'drop in the ocean' 	Feb 2017
The Andrew Croft Memorial Fund	<p>Supports the advancement and education of young people by the provision of grants in support of Arctic expeditions (£500). http://www.acmf.org.uk/</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The project must support the objectives of the Andrew Croft Memorial Fund, as shown below. • The advancement of education of young people so as to develop their mental, physical and spiritual capacities so that they may grow to full maturity as individuals and members of society by the provision of grants to participate in expeditions particularly to the Arctic. • The advancement of education of young people below the age of thirty. • Such exclusively charitable purposes or purposes as the Trustees shall at their absolute discretion decide for the benefit of the inhabitants of Arctic communities. • For the benefit of the public by assisting members of Her Majesty's Constabulary with the cost of further education and training which will enhance their effectiveness within the community. 	Mar 2017

A further list of grant giving organisations for expeditions and field research has been compiled by the RGS. Please note that it may not be appropriate to apply for some funding sources depending on your dissertation topic, e.g. applying for Bat Conservation International when your research will focus on glacier ablation in the High Arctic.

For more sources of funding, visit: <http://www.rgs.org/NR/rdonlyres/9FDC868D-5322-4E2B-BE83-4960BA518F8B/0/GGO2015.pdf>. Please note that this is **NOT** an exhaustive list – there are many more grant organisations, or even supportive organisations who can help to fund or promote your expedition.



South Annapurna Glacier, Nepal. Source: R Carr (2016)

11.3. Explore Event

Explore is the annual expedition and field research seminar held at the **Royal Geographical Society** in London, over a weekend in November. The event brings together scientists, researchers, expeditioners and explorers from all over the world who give talks, run workshops, provide advice and share stories and ideas. It is a great event for those looking to get inspired and plan their own expedition. The cost of a ticket for the weekend is £65 for a student, a group discount may be possible if enough people are interested.



11.4. Communication with Academic Staff and Contacts

It is important to discuss your project with staff throughout the planning and application process, as they can provide advice and guidance in filling out grant forms. Keep them informed about your expedition as you can ask them to look at a first draft, or for a reference if one is required, although be aware that your tutor may be busy with other commitments and responsibilities coming up to grant deadlines so give them plenty of notice, and explain clearly what you would like them to do. They will also need to sign your risk assessment. For overseas expeditions, the Head of Department must sign your risk assessment too. When communicating with staff do not harass them with numerous emails, stick to the facts, explain who you are, what you aim to do and why you are contacting them, as you may not get a positive reply or any at all.

11.5. Publication of Project

You may wish to use social media or online blogs, etc., to publicise your expedition and perhaps get more people interested in your project. Be aware that many people can access this form of publication, including grant organisations, so do try to stay safe while online by adhering to the following advice:

- What goes online stays online. Do not say anything or publish pictures that might later cause you or someone else or an organisation (e.g. Newcastle University) embarrassment.
- Be wary of publishing any specific information about yourself – either in your profile or in your posts, such as phone numbers, pictures of your home, your address or birthday.
- Set up a separate email account to register and receive mail from the site. That way if you want to close down your account/page, you can simply stop using that mail account.
- Never post comments that are abusive or may cause offence to either individuals or groups of society, as this may result in the rejection, or retraction, of funding.
- Always ask permission from individuals or organisations before you post online about them, e.g. listing funding sources which support your project.
- Do not 'Like' or 'Favourite' your own posts – instead, encourage friends and family to share your material.
- Try not to neglect your accounts, use them to their full advantage! Post regularly when you can, although sometimes it is better to wait for exciting news to share.



Below is some advice on what to do and not to do while promoting your expedition:

- Be active on your social media, but don't post so often that you overwhelm or annoy people. This could lead to two problems: 1) Too much information can cause your followers to stop following your posts and 2) Your posts can get lost within their newsfeeds and they won't see the posts that could be really important to them.
- Find out when your followers are most active on social media and post your information during those time frames. This may be especially difficult if you are in a different time zone while on expedition.
- Social media is great for sharing, but make sure your message is the same across all channels: website, public, social media, etc.
- Check your post to ensure that your message will be understood, check for any grammar issues, and check the time you post it to ensure your readers will see it. Make sure all your links are valid.
- Take a chance and be creative with your posts. Show your personality. Help people see what makes you different from the competition. You should be excited about your expedition, your project and the research you can do while there.

Social media is still a brilliant way to encourage people to learn about your project and what you aim to do, which promotes host-country participation and understanding. Some funding sources may ask whether you have an online presence for your expedition as they can promote it further.

11.6. Grant Reports

In return for supporting your project, most grant bodies will request that you complete a report within reasonable time of your return. This may involve creating a poster, preparing a presentation, or writing a full report, or several reports. For example, the Royal Geographical Society requests a preliminary report (completed online), and a full report (to be completed by September of the following year). You need to make sure that you complete the reports by the deadline as this shows your appreciation and enthusiasm for the project, and you may want to apply to the same funder in the future, e.g. for postgraduate projects.



12. Testimonials

James Linighan

Longyearbyen, Svalbard



Over 5 weeks in the summer of 2016 I travelled to Longyearbyen, Svalbard, along with my team of five fellow geography undergraduates. Our aim was to examine the effects of climate change on glaciers in Svalbard. We each carried out our own independent research project with three study glaciers, Longyearbreen, Tunabreen and Scott Turnerbreen chosen. Each of our projects required different timeframes for data collection, for example, on Longyearbreen, a glacier located within a 45-minute walk from our accommodation, we installed ablation stakes from which data was collected every other day. In contrast, research at Tunabreen, a marine terminating glacier located over 1 hour away by boat, was limited to three field days. It was therefore important to create a field plan early in the trip so all research could be adequately completed. It was also important for us to carry out a number of reces to our field locations before starting research in order to scout out safe access routes onto the glaciers. I would recommend overestimating the time this may take in your field plan if you are travelling to remote locations, as hidden obstacles which are not featured on maps, such as meltwater streams, may present themselves.

Abbigale Bennett

Kangerlussuaq, Greenland



In August 2015, myself and 4 other undergraduates embarked on an expedition to the Russell Glacier. Wild camping for five weeks, we collected data daily from the glacier and surrounding lakes for our dissertations. We witnessed the northern lights, different wildlife and survived freezing temperatures in a hard environment. When planning an expedition, especially one as an undergrad, it's important to explore all of your options in terms of grants, kit and advice. I started planning the Greenland expedition around a year before we touched down in Kangerlussuaq. We secured every grant we applied for all while balancing university work, jobs and some sort of social life. We organised the logistics with people in cabins in Greenland from the Daysh cluster in Newcastle and booked flights with the infamous Air Greenland (they still have a plane wreck at the end of the runway where a plane didn't brake in time). If I could offer any sort of advice to budding geographers I would say to plan your trip as much as you can, but don't stress out when things go wrong, because they definitely will! Expeditions are fantastic opportunities to see the world, strengthen relationships with your peers but also build skills as a geographer and as a person. It gives you an edge when applying for jobs because you have experiences to talk about.

If you have the opportunity to go somewhere that is a bit weird or remote and are nervous, don't be. Just close your eyes and jump because I guarantee you will have an amazing experience.

Becky Leitch

Calbuco Volcano, Chile



The endless fieldwork opportunities that the Geography department at Newcastle University offers its students is one of the many reasons as to why I chose to study here, so naturally I took a keen interest when we were introduced to the idea of overseas fieldwork for our Undergraduate Dissertation Projects. Never did I think that this would entail a 4-week expedition to the South of Chile, where I was able to combine both my studies with my passion for travelling.

Organising an expedition can be a demanding process, however working in a team ensured that the responsibilities and tasks were equally shared out. This also gave me the chance to develop my team-working skills, amongst other professional level transferrable skills, that will stand out amongst my CV and be recognised by potential future employers. I would strongly recommend seeking advice from the University Expeditions Committee and societies like the RGS throughout the planning process, as they provide extensive guidance regarding all aspects; from the funding to risk assessments.

Overall, I would definitely say that this experience is one that I will never forget. Being able to see your studies 'come to life' is something that is a truly unique experience and has some amazing and rewarding outcomes that I would encourage every student to embrace.

Jamie Evans

Osaka, Japan



After studying Japanese during semester one of second year, I decided that I wanted to spend the summer break between second and third year in Japan. I then started to look at possible dissertation ideas to do in Japan before reading a paper about the relationship between forest harvesting and occurrence of landslides in steep terrain of central Japan, written by a professor from a university in Shizuoka. After contacting the professor and expressing my interest in his paper and explaining that I was planning the research for my final year dissertation, he invited me to spend some time working in his university while I was in Japan. While there I discussed my research with him and began to do some GIS mapping of landslides using Google Earth imagery and aerial photographs. Then after a month of travelling in Japan, I met up with the professor in Osaka and went to the study site, where I spent a week working with the professor and students testing, among other things, root strength using a shear box.

To be able to combine travelling with the data collection for my dissertation was an incredible opportunity. And then also to be able to work and interact with Japanese students added to my experience and helped me to learn a little more Japanese.



Cat Bryan

Belvedere Glacier, Italian Alps

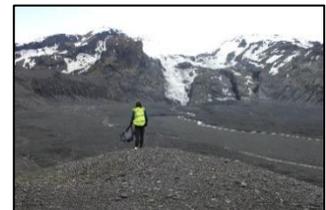


For my dissertation I wanted to focus on glacial outburst floods. Previous to this idea, I had decided to focus on ablation rates and we had picked a location, however this was later discounted due to insufficient funding. We raised £5,500 however this was not enough for us to carry out our original plan. Therefore, we decided to spend an evening researching alternative options that may be better suited to our budget. We spent a whole evening on the internet looking for different glaciers and seeing if they were accessible. We finally decided on Belvedere Glacier in the Italian Alps. It was vital that planning was done prior to the trip as we had to plan our study sites.

On the first day we took no equipment with us and visited the glacier, we spent the whole day walking around as this would provide us with an overview of the area. Furthermore, there may have been areas that we had not looked at previously that when seeing in person seem more interesting. One thing that is very important is to get involved in the local community, we met so many people who could educate us further about the glacier. Being involved with the local community also meant that we were able to get discounts for a number of things, including the chairlift which saved us £300 each. Make the most of the trip, I hope to do more things like this in the future but every expedition is a once in a lifetime experience.

Jonathan Hillaby

Gígjökull, Iceland



Myself and two other geography students planned an expedition to Gígjökull and Eyjafjallajökull in Iceland, looking at the dispersion of ice blocks following a volcanogenic jökulhlaup, sandur response following a volcanogenic jökulhlaup and the effect of the little ice-age in Iceland. Wild camping allowed us to stay closer to the study site, and we hired a 4x4 to get to the field site. Some roads in Iceland prohibited cars that weren't 4x4. The dGPS was incredibly useful although it did require extra baggage. Even at the height of summer it can be cold, so a thick sleeping bag and liner was advised. During the day the weather near an ice cap can be changeable, so layers and waterproofs were needed, as well as wellies for crossing rivers. While analysing the data, I found SfM can be quite temperamental when computing.

If you are planning your own expedition, book flights in advance to get better deals, invest in a larger rucksack to carry more equipment and store coats when it is warm. Also, it's Iceland, so set aside 2 – 3 days to do touristy stuff such as: Seljandafoss, Skogafoss, Black Beaches, Gullfoss, Geysir, Reykjavik, Blue Lagoon!

13. Conclusions

Starting early is key to a good dissertation and a successful expedition. Think of a topic that interests you (enough to spend the next year studying it), decide on a location and think about where you stand between practicality and ambition. Gather a team of enthusiastic students who wish to study similar topics or in a similar place, and then decide on a set of linked aims and objectives. The first funding deadlines are in January, so look at the applications well before this time so that you know what needs to be included. Talk to members of staff to develop your ideas and to help make contact with other students with similar ideas. Staff members will need to OK your applications and to provide references, and you must give them plenty of time to do this. Remember that Newcastle University and grant bodies value your safety above all else, so writing a comprehensive, detailed risk assessment is key.

Once you are at your field site, try to be aware of risks that have not been previously identified, such as meltwater channels obstructing your path, and act with the appropriate amount of caution for the situation. Your itinerary may alter when you are there, perhaps due to delays in collecting data, or poor weather conditions prohibiting research, so make sure to adjust your timescales and let the university or a family member know if plans change. Perhaps use social media platforms or blogs to update your sponsors and/or family members on your progress while in the field (if you have internet access), and be swift to complete reports for grant organisations (if requested). Things will go wrong and plans will change, so it is a good idea to have backup plans and to think flexibly in the field.

Principally, you may be visiting a country for the first (and last) time, so make the most of it! Spend a few days enjoying the local culture and trying new activities. Using your summer holidays to complete research for your dissertation both saves you time in Stage 3, as you will not have to complete research when you return to university, and shows employers that you are a hard worker who is confident in organising and leading an expedition. The skills and experiences you gain will benefit you in your career and/or further study, and will be a lasting memory to look back on your time at Newcastle University.



Kayaking at Cochamo. Source: Team Chile (2016); Bolterdalen, Svalbard. Source: Team Svalbard (2016); Russell Glacier, central-west Greenland. Source: R Carr (2015)