

# **BRITISH UNIVERSITIES KAYAKING EXPEDITION 2017**

Report for the Exploration Board

Imperial College London

15<sup>th</sup> November 2017



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## **1. INTRODUCTION**

### **1.1. Expedition Objectives**

The general aim of this expedition is to explore the white water rivers of the Philippines during the wet summer months of the monsoon season. Evidence of previous kayaking expeditions to the country is sparse, and all those unearthed were conducted in the dry winter months. We believe that this will be the first organised kayaking expedition to the Philippines in the monsoon season and as such will enable us to access rivers that have never been navigated by kayakers before.

The aims of our expedition are:

- To successfully complete a number of first descents of rivers on the island of Luzon.
- To enjoy the thrill of kayaking in a new destination that seldom sees British tourists.
- To improve the kayaking skills of all members and gain valuable expedition experience.
- To reveal the hidden potential of the northern Philippines as kayaking destination for others.
- To boost the uptake of the sport in the Philippines with locals in the area.
- To return safely to the UK to share our epic adventure with a wide audience and continue to encourage University students to participate in Canoe Clubs and similar extracurricular activities.
- To raise awareness of the British Universities Kayaking Expedition for future generations.

None of the team have ever visited the Philippines before, few have even been to South East Asia, and hence this will be a unique challenge for each of us and we are determined for it to be a successful expedition and eager to document our findings to the wider world.

## 1.2. BUKE

The British Universities Kayaking Expedition (BUKE) is a biennial event in which a few highly skilled University white water kayakers are elected to conduct an exploratory kayaking expedition to a rarely paddled part of the world. After written application, a shortlist of approximately 20 students is decided on by members of previous BUKE expedition teams. This score of individuals is invited to a selection weekend to participate in team building exercises and kayaking challenges, with each student presenting a potential destination for the expedition. The weekend culminates in a narrowing down of the most popular proposals and a vote for the final team (5-9 individuals). This system effectively allows a strong team with good cooperation skills to be selected, increasing the likelihood of expedition success. The first BUKE expedition took place in 2005 and traversed the mountainous terrain of Kyrgyzstan, a country that now sees increasing numbers of paddlers and commercial trips due to the amazing quality of the white water on offer. Subsequent BUKE teams have adventured to the 'four borders' (Russia, Mongolia, China and Kazakhstan), Vietnam, Venezuela, Ethiopia, and Madagascar, each successful in their main aims and returning with stories to inspire more adventures. The expeditions are entirely self-organised; from choosing the destination, to budgeting, planning logistics and river mapping. Support is often offered by BUKE 'alumni', but ultimately the fate of the trip is down to good forward planning and team work.



*Famous scenery along the Chico River, near Bontoc (© Lonely Planet)*

### 1.3. The Philippines

The destination chosen by the British Universities Kayaking Expedition 2017 is the Philippines. The Republic of the Philippines is an archipelago consisting of more than 7000 islands, most of which are covered in tropical rainforest, contributing to the country's incredible megadiversity. The largest island is Luzon, and despite being home to the capital city of one of the most heavily populated countries on Earth, the northern island is teeming with exotic wildlife and has relatively low human inhabitancy. Fortunately for us, northern Luzon also contains abundant rivers which have yet to be explored (Section 3.1.). As University students, the timing of the expedition is limited to the summer months and as such the destination must also be carefully selected to comply with this time period. June to November marks the wet season in the Philippines, therefore guaranteeing enough water for some rivers to flow that otherwise might not and increasing the difficulty of simpler stretches of white water that may have been rather straightforward.

Unfortunately, there have been recent instances of terrorist activity in the southern Sulu archipelago and the UK Foreign Travel Office (FTO) advises against all travel to this region. However, this is very far removed from the areas which we wish to explore in the north of Luzon (given the green stamp of approval by the FTO) and thus we are very unlikely to be affected. The sunny tropical beaches of the Philippines are a popular British holiday destination and the vast majority of visits are trouble free.



*Travel advice for the Philippines (@Foreign Travel Office, UK)*

#### 1.4. Itinerary

Due to other commitments, the team will be flying out to the Philippines in two lots. The first 5 individuals (including the Team Leader, River Leader and Treasurer) will be flying out on Wednesday the 26<sup>th</sup> of July from Glasgow to Manila, via a stopover (See Section 3.2.1 for details). We will arrive in Manila at 10pm local time and stay in a hostel. We have organised two vehicles to meet us at the airport - one for kayaks and other equipment, and one for us – and the following morning we will drive north to Baguio. From Baguio we will change to a mountain Jeepney and travel to Sagada.

In Sagada we will meet with Steven Rogers, a British kayaker who has lived in the Philippines for the last 15 years (see Section 3.2). He has worked as a raft guide and canyoning instructor in the area and will therefore be able to provide information about the local rivers. He has already provided significant help with logistics in the preparation stages of our expedition, including helping us find suitable transport.

This itinerary is subject to suitable water levels and other variables, a degree of flexibility is presumed.

<b>DATES</b>	<b>ITINERARY</b>
27 <sup>th</sup> July	Arrive in Manila
28 <sup>th</sup> July	Meet drivers and drive to Sagada. Meet with Steve.
29 <sup>th</sup> July - 3 <sup>rd</sup> August	Paddle sections of the Rio Chico and its tributaries – good warm up in a more touristic area where there are some local raft guides
4 <sup>th</sup> - 7 <sup>th</sup> August	Drive south to Kabayan. Paddle various sections of the Agno river, some have never been run before.
8 <sup>th</sup> August	The rest of the team arrive and travel to join us near Bontoc
9 <sup>th</sup> - 13 <sup>th</sup> August	Drive to Atok and paddles the Amburayan River (never been run). It drains west from Atok, Benguet out to La Union/Ilocos coast. Approx. 40km to Sugpon. Potential multi-day (3 or 4 days).
14 <sup>th</sup> - 17 <sup>th</sup> August	Paddle sections of the Bued river. South of Baguio, it drains towards Rosario (south-west). A multi-day river.
18 <sup>th</sup> - 20 <sup>th</sup> August	Break from kayaking. Sacha departs to Manila. Team perhaps climb Mt Pulag, the highest peak of Luzon.
21 <sup>st</sup> - 25 <sup>th</sup> August	Investigate the river (unknown name) to the east of Mt Pulag, running south to north towards Tinoc. A multi-day section all the way to the Bayombong-Ambaguio road (26km).
26 <sup>th</sup> August	Drive to Barlig, put-in for the Upper Taludan River. Paddle from Barlig to Lias.
27 <sup>th</sup> - 30 <sup>th</sup> August	Explore the Middle Taludan River. Lias to Lubo. Very remote, steep sided gorge, 27km. Elevation: 1200m to 500m. Multi-day. Never been run.
31 <sup>st</sup> August	Paddle the lower Tanudan, from Lubo to Chico Confluence
1 <sup>st</sup> - 7 <sup>th</sup> September	Paddle sections of the Pasil and its tributaries
8 <sup>th</sup> - 10 <sup>th</sup> September	Explore the Ifugao province. Happao River (sometimes called the Ibulao) and a tributary running down from Hungduan.
11 <sup>th</sup> September	Travel to Manila
12 <sup>th</sup> September	Fly back to the UK



*Chico River near Sadanga (© riderako.wordpress.com)*



*Upper Chico rafting near Sagada (© Tripadvisor)*

## 2. THE TEAM

The 2017 British Universities Kayaking Expedition is composed of 7 team members from different Universities across the UK, each bringing valuable skills and experience to the expedition.

### 2.1. Adam Vaughan

Team Role:	Trip Leader	
DOB:	03/07/22 (21)	
Academic Background:	2013-2017 Currently in 4 <sup>th</sup> and final year of Spanish Degree at Cardiff University	
Experience:	<p>I started kayaking when aged 11. Before coming to University, I went on trips to Scotland and the French Alps. As soon as I began studying at Cardiff University I went kayaking at every opportunity. Over various University holidays I have paddled in France, Spain, Italy, Austria and Switzerland.</p> <p>With my third year abroad in Colombia, I was lucky enough to meet some amazingly friendly paddlers who showed the incredible rivers that Colombia has to offer. I am now eager to experience more kayaking outside of the European continent.</p>	

## 2.2. Sacha Corby

Team Role:	Secretary and Grants	
DOB:	02/03/93 (24)	
Academic Background:	<p>2011-2016 Master of Chemistry from the University of Edinburgh</p> <p>2016-2019 Currently a PhD Student in the Department of Chemistry, Imperial College London</p>	
Experience:	<p>I started kayaking in 2011 when I joined Edinburgh University Canoe Club and, after a wet start, fell in love with the sport. Since then I have enjoyed many days on the water, in Scotland and beyond.</p> <p><i>Summer 2012</i> – French Alps  <i>Winter 2012</i> – USA  <i>Summer 2013</i> – Uganda  <i>Summer 2014</i> – French and Italian Alps  <i>Winter 2014</i> – New Zealand  <i>Summer 2015</i> – French Alps and Norway  <i>Summer 2016</i> – French and Italian Alps and  <i>Autumn 2016</i> – Kyrgyzstan and Austria (Sickline World Championship)</p> <p>In 2014-15, I completed a year abroad in Singapore and travelled around South East Asia. Although I didn't make it to the Philippines, this experience will be valuable in helping to judge expectations of climate and environment before the trip.</p> <p>I am a keen swimmer and skier and have worked as a Lifeguard, thus I am familiar with a wide range of first aid practices. I am also a member of the Scottish Canoe Association and have completed the BCU White Water Safety and Rescue course.</p>	

**2.3. Gareth Lake**

Team Role:	Treasurer	
DOB:	15/06/94 (22)	
Academic Background:	2012-2017 Master of Chemical Engineering at Aberdeen University	
Experience:	<p>Starting kayaking with Aberdeen University Canoe Club in September 2013, I quickly became obsessed with the challenge of a new sport. I soon found myself adopting the ‘if you’re not scared you’re not doing it properly’ attitude towards rivers. This may have led to some carnage, but it was a lot of fun along the way. I have been to the French and Italian Alps, but owe the majority of my experience to the rivers of the Scottish Highlands.</p>	

## 2.4. Erik Francis

Team Role:	Mapper and River Leader	
DOB:	28/03/94 (23)	
Academic Background:	2012-2017 Meng Civil at the University of Edinburgh	
Experience:	<p>I have 8 years of experience of white water kayaking. I held presidency of Iowa State University Canoe Club during my year abroad and was Master of Works for the Edinburgh University Canoe Club. I have had experiences both kayaking and leading trips to the following destinations:</p> <p><i>Summer 2012 – French Alps</i>  <i>Summer 2013 – French Alps</i>  <i>2014/2015 – Central USA</i>  <i>Summer 2015 – South East USA</i>  <i>Winter 2016 – Uganda</i>  <i>Summer 2016 – South East USA and Canada</i>  <i>Autumn 2016 – Kyrgyzstan and Austria (Sickline World Championship)</i></p> <p>I have also traversed both French and Swiss alps self-supported via foot.  I hold current certification in Wilderness First Responder (SOLO).</p>	

## 2.5. Lauren Strickland

Team Role:	Logistics	
DOB:	03/04/96 (21)	
Academic Background:	2015-present Geography and Sociology at the University of Glasgow	
Experience:	<p>My kayaking experience has been one of have a slalom background and it was a wonderful experience to be on the Junior GB Slalom Team for 2 years. However, then I realised white-water kayaking is actually pretty fun. I've paddling a lot in Scotland and the French Alps.</p> <p>My biggest trip was on the Grand Canyon in Colorado. Unfortunately, a month before I broke my leg trying to launch out of a half pipe on a skateboard. Getting to and paddling the Canyon with my leg in a cast and on crutches was one of the best adventures I've had so far and helped me to manage an expedition situation.</p>	

## 2.6. Peter Williams

Team Role:	Funding and Safety	
DOB:	08/01/97 (20)	
Academic Background:	2016-present Mechanical Engineering at the University of Edinburgh	
Experience:	<p>When I was a child I spent a lot of time on flat water which meant by the time I started white-water I was already comfortable in a boat. I'm from North Wales so I've been able to paddle the Fairy Glen, the Mawddach and the Glaslyn regularly. I have also paddled in Norway which has some amazing slides and drops.</p> <p>The biggest trip was two months out in Nepal. I started off safety kayaking for a rafting company, and got pretty bored of doing the same sections so went to Pokhara and found a load of kayakers to boat with. I then spent the last month and a half of the trip paddling rivers like the Kali Gandaki, Bhote Kose, Marsyangdi, Modi and Madi Kola and many more.</p>	

## 2.7. Jiri Tykal

Team Role:	Equipment and Sponsorship	
DOB:	16/03/92 (25)	
Academic Background:	2016-present Postgrad. Master in Music at Bangor University	
Experience:	<p>I probably started kayaking at the age of 5 or 6. In 2011 I took part in the Adidas Sickline race for the first time. In 2014, I moved to Bangor and the Fairy Glen became my playground. I am 2015 and 2016 British Universities Creek Race Champion and since 2016 also a member of the British Wildwater Racing Team.</p> <p>So far, I have kayaked in Austria, Czech Republic, France, Germany, Italy, Norway, Poland, Slovakia, Spain, Switzerland and the United Kingdom.</p>	

### **3. LOGISTICS**

#### **3.1. River Mapping**

Google Earth is commonly used in the kayaking community to assess whether a particular section of river is likely to be enjoyable to paddle, and it was this technology that ultimately led us to choose the northern Philippines as the 2017 BUKE destination as so many rivers fit our criteria.

Zooming in on the area of interest, and using our empirical knowledge of the landscapes in which ideal rivers form, it is possible to single out a potential river and map the length and approximate gradient using the elevation profile. Taking into account the width of the river from the aerial satellite view and the width of the valley, it is possible to roughly estimate whether the river is of significant volume. With volume and gradient defined, we can assess whether the river is likely to be manageable. Generally, a drop in gradient of 10 to 20 metres per kilometre is a good target, unless the river is particularly narrow in which case a steeper gradient can sometimes be tackled.

We have carried out this analysis for a number of rivers in the Philippines (see Section 1.4) and believe that these rivers are likely to be sufficiently challenging, while still achievable.

#### **3.2. Contacts**

We have made contact with Steven Rogers, a British Expatriate and kayaker who lives in Sagada in the Philippines. He has been incredibly helpful in providing us with more local river knowledge. We have exchanged many messages with Steven which has helped us decide what gear we will need and the rivers we intend to descend.

We have also spoken to Neil Phillips, another British kayaker who has paddled in the Philippines. He has paddled on some of the rivers around Sagada and has recommended exploring the rivers in the north-west of the Philippines, in between the towns of Laoag and Kabugao. He has also paddled on the south island, Mindanao, but due to the current security situation he does not think it is worth the risk, given the potential on the northern island. Neil has told us that to explore all the possible rivers on Luzon, it would take at least three months, so we believe that we will have plenty of river options for our seven week stay.

### 3.3. Transport

#### 3.3.1. To the Philippines

Each member of the Team is flying to Manila with Emirates Airlines. The first group, departing on the 26<sup>th</sup> of July, are flying out from Glasgow International Airport and stopping over in Dubai. The second leg departs 8 hours later from Dubai, arriving in Manila in the evening of the 27<sup>th</sup> local time. We are taking our boats and paddles as our checked luggage on the flight, with the rest of the gear packed inside the boats. The second group are completing a similar journey, departing on the 6<sup>th</sup> of August.

#### 3.3.2. In the Philippines

Within the Philippines we will travel in the mountain Jeepney that we will transfer to in Baguio, following the motorway drive from Manila. Steven Rogers has put us in touch with a local Jeepney driver whose normal line of work is shuttling hikers to and from Mount Pulag. As it will be the wet season, there will be little work for him in August, so he has agreed to drive his truck for us during our stay. Steven has confirmed that this is by far the easiest way for us to get to the rivers in the jungle which are difficult to access by road.

These vehicles are sturdy and should be able to handle some off-road driving. By using a local driver with the vehicle we will not need to worry about driving licences for ourselves. Some of the sections that we paddle will be multi-day sections, hence our driver will drop us off at the put-in and meet us at a pre-designated take-out a couple of days later.

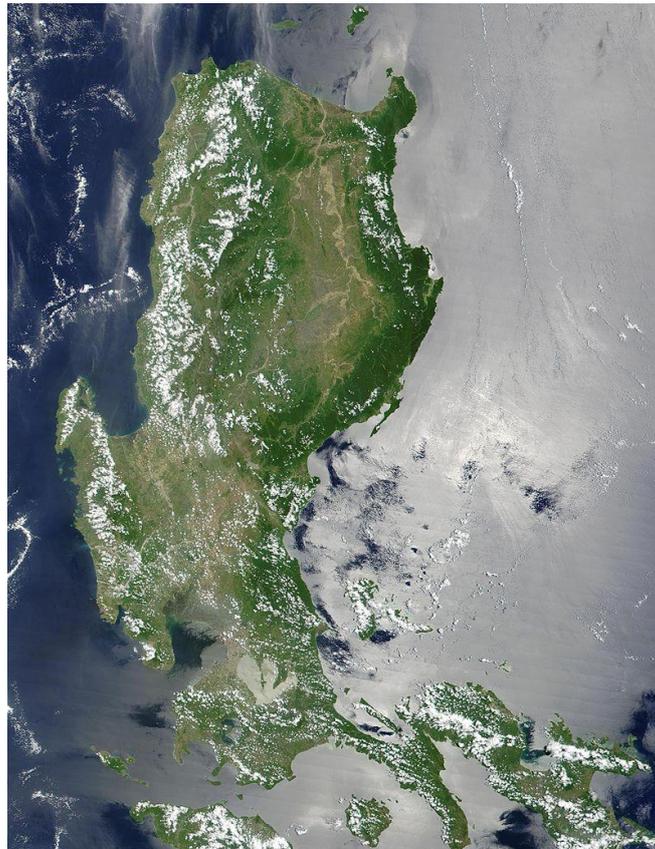


*A Jeepney owned by rafting company 'Chico River Quest' (© [www.pinoypography.org](http://www.pinoypography.org))*

### 3.4. Nature

#### 3.4.1. Terrain

The Philippine archipelago is largely volcanic in origin and thus fairly mountainous. The island of Luzon contains the country's second highest point, Mount Pulag in the Cordillera Range, at 2842 metres above sea level. Some volcanos on the island are still active, so although there hasn't been an eruption in almost 20 years it is something that we need to be aware of. As well as being situated in the Pacific Ring of Fire, the Philippines are also located over fault lines that result in numerous earthquakes, the majority of which, however, are so minor that they cannot be felt. Much of the tropical rainforest that once covered Luzon has been removed by illegal loggers, and so it will be interesting to see how the landscape varies as we travel.



*Satellite Image of Luzon (Wikimedia commons)*

#### 3.4.2. Weather

As previously mentioned, this expedition will take part during the wet season in the Philippines. While this is a key area for the success of the expedition, it may also provide numerous challenges including potential flooding and landslides. It will be up to the team to determine whether it is safe to kayak a particular river on a particular day and a degree of flexibility will be essential during the trip. The team is adequately experienced to be aware of potential rising water levels and flash flooding, and will also keep the camp at higher ground where possible.

There is a fairly high risk of typhoons during our time in the country and it may be the case that we will have to shelter in a hostel for a few days until it passes.

The climate is tropical monsoon and humid sub-tropical at higher altitude, with average temperature around 26 degrees during the day, dropping a few degrees at night.

### **3.4.3. Wildlife**

The Philippines is home to an incredible array of endemic wildlife, with hundreds of bird species and many more reptiles, insects and fish. There are 14 species of poisonous snake to be aware of and one endangered species of river crocodile. The largest threat from wildlife, however, is from mosquitoes that may carry malaria, dengue or Japanese encephalitis. The team will take adequate prophylaxis and as many precautions as possible to avoid being bitten.

### **3.5. Vaccinations**

Each member of the team has already begun doctor consultations to determine which vaccinations and anti-malarial prescriptions are required. Many individuals in the team are already covered for the most common vaccinations. Japanese encephalitis and Rabies vaccinations are recommended due to the duration of our stay in the country.

### **3.6. VISAs**

VISAs are necessary for any stay longer than 30 days and thus are applicable for the majority of the team. They can be obtained from the Philippine Embassy in London before departure and cost £28.

### **3.7. Equipment**

#### **3.7.1. Kayaking**

All of the equipment that we need for the expedition we shall be bringing with us. The majority of this equipment is kayaking kit consisting of the boats, paddles, clothing and safety gear. We are fortunate enough to be sponsored by Radical Rider and Waka Kayaks who have given us a significant discount on new Waka boats. Each of us has purchased a boat slightly larger than one in which we'd normally paddle to be capable of accommodating our camping gear during multi-day kayaking sections.

We are currently in the process of purchasing two-piece split paddles to ease our transportation, both to and within the Philippines. Our clothing is sponsored by Palm Equipment Ltd. providing us with dry cags and board shorts, buoyancy aids, and safety gear such as throwlines and river knives for rescue. The remainder of the kit such as ropes and first aid will be purchased as required before departure. We are also bringing with us a number of cameras and GoPros in order to document our adventure.

### **3.7.2. Camping**

It is likely that on several occasions during our trip, including for example our first night in Manila, we will stay in hotels and youth hostels. However, in order to save money and be situated closer to the rivers, we will be camping for the majority of the expedition. Each of us will bring a hammock or bivy bag and a waterproof tarp for sleeping and cooking under. We will use ropes, throwlines, and paddles to help pitch camp on multi-day sections.

### **3.7.3. Cooking**

We plan to purchase three light-weight stoves to take with us to cook on for the duration of the expedition. These will be compact and easily transportable to store in the back of boats or in the Jeepney. A small number of pots and pans will be required, with one set of cutlery/crockery per person. River knives can easily double as cooking knives for preparing food.

## **3.8. Food and Water**

Aside from some emergency energy bars that we may take with us, we will buy our food in supermarkets and local stalls in Luzon. Bulk dry food such as grains and cereals can be bought en masse and stored in the jeepney. I'm sure there will be ample opportunity to try some more exotic foods on offer in the country.

Each of us is in possession of a LifeStraw water bottle which filters out almost all known bacteria and protozoa. This means that we will be able to safely drink the river water. For cooking, we will buy sealed water when we buy food.

## **3.9. Emergency Communication**

Courtesy of River Legacy, we have been lent two Delorme InReach GPS communication devices. These allow two way communication and GPS mapping of our location should we have need for immediate medical assistance or airlifting from the area.

The two-way messaging service will allow us to contact the Jeepney driver whilst we are on the river. We can keep him updated regarding our progress on the river and when and where to meet us. We plan to keep on Delorme device with us on the river and give one to the Jeepney driver so he can contact us. This may prove useful if there is a landslide, for example, and he cannot get to the agreed meeting point.

## 4. FINANCES

### 4.1. Budget Estimation

#### 4.1.1. Overview

Table 4.1. Overview of Estimated Costs for the team on the 7 week expedition

<b>Item</b>	<b>Cost</b>
Flights (x7)	£2800
Vaccines (x7)	£4550
Visas (x7)	£200
Transport	£2500
Accommodation (x7)	£1000
Food	£1400
Additional Equipment (x7)	£4900
<b>Total</b>	<b>£17350</b>

An overview of expected costs can be viewed in Table 4.1. The total amount corresponds to approximately £2500 per person.

#### 4.1.2. Flights

The majority of team members have booked return flights, Glasgow to Manilla with Emirates, for approximately £400. Kayaks are included in the baggage allowance.

#### 4.1.3. Vaccines

The cost of vaccines varies between local GPs however an initial quote for all recommended vaccinations can be viewed in Table 4.2, totalling around £600 per person. As mentioned in Section 3.5, some members of the deal will likely already be vaccinated against a number of these diseases from previous trips.

Table 4.2. Vaccination cost estimates

<b>Vaccine</b>	<b>Cost</b>
Hepatitis (A & B)	£201
Diphtheria & Tetanus	£32
Japanese Encephalitis	£178
Yellow Fever	£58
Rabies	£120
Anti-malarial	£90
<b>Total</b>	<b>£678</b>

#### **4.1.4. Visas**

Citizens of the United Kingdom can enter The Philippines without a visa for a period of up to 30 days. However, as the expedition will extend for 7 weeks, a tourist visa will be required for the majority of the team; allowing up to 59 days in the country. The tourist visa costs £28.

#### **4.1.5. Transport**

The team will be hiring a Philippine Jeepney and driver to reach remote areas of the country. We have been given a quote of £40 per day, for 48 days the cost of hire will be £1920. Accounting for fuel, an additional £500 is added to yield a rough transport expenditure of £2500.

#### **4.1.6. Accommodation**

To minimise cost, the majority of accommodation will consist of campsites. However there may be areas unsuitable for camping such as cities, where hotels or hostels will be required. A budget of £1000 is allocated to accommodation on the basis of 10 hotel days for each team member at £15/night.

#### **4.1.7. Food**

Food in the Philippines is considerably cheaper than in the UK, and the team will be buying and cooking food as cheaply as possible to minimise expense. A food budget of £4/day for each team member yields £1372 for 49 days, which will allow for some meals in restaurants to sample local cuisine.

#### **4.1.8. Additional Equipment**

As the majority of the team have not performed multi-day expeditions in jungle environments before, significant expense will come through the purchasing of necessary additional equipment. Multi-fuel stoves will be required as well as hammocks, tarps and additional paddling safety equipment. A comprehensive first aid kit will also need to be compiled. Therefore, £700 per team member has been allocated into additional equipment in the budget.

## 4.2. Grants and Support

We have applied to numerous different grant and sponsorship programmes and are still waiting to hear back from a few of them. We were successful in an application to the Lord Mayor of London's 800<sup>th</sup> Anniversary Trust and have been gifted £1500 towards the costs of the expedition, for which we are incredibly grateful.

As mentioned in Section 3.7, we have received support from a number of kayaking companies who are offering us discounts on their products to help the expedition. This has also helped to make the expedition more achievable for University students. The Universities of Glasgow and Aberdeen have also graciously offered financial aid as teammates Lauren and Gareth attend these institutions, respectively.

The remainder of our budget will be made up by the individuals on the team from part time jobs, savings and any fundraising activities.



*Amburayan River with low flows in May (© bulasahangin.blogspot.co.uk)*

## 5. RISK ASSESSMENT

### 5.1. On the River

<i>Potential Hazard</i>	<i>Potential Harm</i>	<i>Precautionary Measure</i>	<i>Response</i>
Capsize and hit head	Concussion, minor head wound	Always wear helmet on/near the river	Escort kayaker off river and monitor over 24 hours. If condition deteriorates, seek medical assistance.
Rising water level, flash flooding	Loss of equipment, Drowning	Check weather forecast before put on. Be swift to exit river	Contact driver, locate best pick up point and exit location.
Capsize and exit boat (swim)	Bodily injury, drowning	Choose rivers of suitable difficulty for the whole team. Set up adequate safety.	Swiftly execute rescue to retrieve swimmer.
Lodging of kayak mid-stream or 'pinning'	Kayaker may remain inside kayak leading to injury or drowning	Always proceed with caution on the river and scout to check that it is safe.	Rescue the swimmer and unpin the boat if safe to do so.
Entering/exiting kayak on slippery rocks by river.  Scouting rapids on riverbank.	Injury due to slipping/falling. Foot injuries/twisted ankles, etc.	Helmet and BA to be worn at all times while near river. Dangerous routes are avoided where appropriate. Suitable footwear to be worn at all times. Ropes are used to portage the kayaks over particularly dangerous terrain as appropriate. Access to rivers will be made via planned put-in and take-out points.	Rest the injury as required. Seek medical assistance if severe.
Loss of light	Increased risk of accident (see above) due to falling levels of light.	Be conscious of the time while on the river. Plan river sections appropriately.	Walk off the river if it becomes difficult to paddle safely. Contact the driver to arrange new meeting point.

**5.2. Off the River**

<i>Potential Hazard</i>	<i>Potential Harm</i>	<i>Precautionary Measure</i>	<i>Response</i>
Adverse weather, typhoon	Loss of equipment, bodily injury, death	Check weather forecast and keep up to date with local news.	Seek shelter immediately, leave strongly affected area if possible.
Traffic accident	Bodily injury, death	Follow local rules, drive safely during and avoid rush hours	Seek medical assistance
Tropical disease	Illness, malaria	Take antimalarial medication as prescribed, avoid being bitten by covering up skin at dawn and dusk.	Rest. Seek medical assistance if required.
Street crime, robbery	Financial loss, bodily injury	Keep all valuables hidden, avoid higher risk areas	Seek medical assistance if required.
Bitten by snake	Bodily injury	Wear appropriate clothing and avoid high risk areas at night.	Seek immediate medical attention.

## 6. THE EXPEDITION

### 6.1. Expedition Logbook

#### Day 1-3 - Arriving in the Philippines

On Wednesday 26<sup>th</sup> of July 2017, 5 team members of the British Universities Kayaking Expedition met at Glasgow International airport, excited and rather apprehensive. After some desperate haggling and confident fudging of numbers, we persuaded the airline to let us take our rather oversized kayaks on the aircraft as normal checked luggage. Wheeled out of sight, we could only hope that our boats would survive the 8 hour flight to Dubai, 8 hour stopover, and be boarded on the next 8 hour flight to meet us in Manila. Indeed they were, all 5, much to our relief.



*Departing from Glasgow*

The humid South East Asian air hit us like a wall as we exited the airport. We had arranged a driver to pick us up from the airport on arrival at 11pm and immediately left the hectic city, driving north to Baggio through the torrential rain. We arrived in Baggio just as light was beginning to enter the sky at 6am, although it remained gloomy as dark clouds perpetually spat rain down at us. We sheltered at a petrol station until Mr Eddie finally arrived with his jeepney. Eddie was to be our driver for the entirety of our stay in Luzon and we were relieved to find he spoke a couple of English phrases, accompanied with pointing gestures. We tied the boats onto the roof in the monsoon rain and spent the rest of that day being jostled around in the back as we made slow progress towards Sagada and our accommodation.



*The Jeepney in all her Glory*

#### Day 4-6 – The Chico

We hired a house in Sagada for the duration of the 7 week expedition to use as “Base Camp” and made full use of it in the first few days as we got our bearings. We met with Steve Rogers, our contact in Sagada and formulated more detailed plans about which sections we wanted to do first and how to get to them.

Our first full day was spent kayaking the Upper Chico, which was to become our ‘local run’ during our expedition and provided a great warm up. Riding on the back of the last typhoon, water levels were high and the boys paddled a first descent on the second day of the trip – already ticking off one of our major aims of the expedition! The Balitjan River proved to be full-on and incredibly exciting. The following day we paddle more of the Chico river and made our first plans to leave Sagada.

#### Day 7- The Talubin

We rose early, had some porridge for breakfast and drove towards Bontoc, aiming for a river we’d affectionately named after our driver. Unfortunately the levels were too low so we drove further over the pass to the Talubin river. After buying some supplies from the local shop, we shouldered our boats and began our hike down to the river across the tiered rice paddies that occupy many of the steep slopes of Luzon. It was hard work as it was very steep with narrow pathways, and it was an hour until we made it down to the water. The river proved to be an entertaining and fairly easy run, taking less time to complete than the walk-in.



*View at the Get-out of the Talubin*

### Day 8-12 – The Amburayan

After some more planning with Google Earth, we set off in the Jeepney and drove further south to the Amburayan River, none of which had ever been paddled before. We arrived in Naguey – a small municipality of 1000+ people (350 families) – around 3pm and then scouted the Pasdong Gorge. That evening, after talking with the “Captain” of Naguey, we were invited to stay in the Barangay hall. Mr Eddie cooked us dinner for a change and introduced us to Sayote, a green vegetable unlike any I’ve ever tried before.

The following morning, we were waved farewell by the locals as we paddled down the river. We weren’t sure what to expect from this first descent and were treated to some amazing whitewater in a beautiful, though committing, gorge. All went smoothly with the hardest rapids behind us, but nerves and anxiety got the better of me and a small error on my part propagated into disaster as I capsized and swam above a large rapid. Safe, though severely shaken, I was rescued by a team member and the boys went on downstream to rescue my boat. With a degree of miscommunication, I was handed one of two GPS tracking devices and told to head to a path. I spent the next 7 hours hiking 1.2 vertical kilometres through steep jungle, following the advice of any farmers I happened upon, all of whom directed me up towards the promise of a road. Alone without food or water, I encountered a snake, a man with a gun, and a number of nasty leeches, without ever reaching a road that the jeepney could get to me by. Meanwhile the boys had rescued my boat, completed the section and were having their own difficulties trying to get to me, including dealing with a landslide, a burst tyre and a fallen vehicle. With guides helping the boys to try to reach me, the eventual conclusion was that we’d have to meet back at the original swim location and walk out up the other bank. Many hours later, and in total darkness, we were regrouped and made it out of the jungle in one (admittedly mentally broken) piece. It was the hardest day of the expedition for me, and certainly affected the group dynamic.

On day 10, we hiked back down to the river to get my boat out and spent the afternoon resting. New plans were formulated based on our new knowledge of the rivers in the area. My confidence knocked,

I didn't paddle the Pasdong gorge on Day 11, but the boys met some exciting challenges and got some good footage. We slept in Naguey Barangay hall again that night and were introduced to the Major of Atok the following morning. He is responsible for the 13 municipalities of the region, and wished us luck as we headed back to the Amburayan river for a redemption run. This was a successful run, much to my relief, and we made it down the 9 km without any issues whatsoever.

#### Day 13-14 – Jeepney repairs

The jeepney began spewing out some nasty fumes and Mr Eddie decided that it was time to head to the garage so after some breakfast at his mother's house in La Trinidad, we left Eddie with his vehicle and took a proper Jeepney, i.e. a bus with locals, into the town of Baguio. We spent the day exploring the market and the town and were shocked to discover on our return that Eddie has single-handedly replaced the entire engine and that it worked! He was filthy and welding without goggles, but safety measures seem to be very lax in the Philippines. At 4 am on day 14 we drove to pick up Lauren and Jiri from the petrol station that Eddie had met us at almost 2 weeks earlier. The full team had finally assembled and everyone was happy for it. We drove North again to Sagada and base camp.

#### Day 15-16 – The Chico

We introduced Lauren and Jiri to the Chico and then paddled a new section of it down from Bontoc, with some more technical moves that would have made the section very challenging in higher water. Day 16 was spent battling with Google Earth and making plans, with half the group wanting to stay at base camp and wait for another typhoon to bring more rain, while the other half were keen to press on with whatever rain the monsoon brought and continue regardless. Fortunately, after chatting with Steve and using his internet to check weather forecasting, the latter opinion won out and with no typhoon on the radar for at least a week, we made plans to move.



*Jiri enjoying the Chico*

### Day 17-20 – The Journey to Abra

We paddled more sections of the Chico river, down to Tinglayan, and after a long day we managed to convince the Barangay council in Tinglayan to let us sleep on their outdoor basketball court. The following morning we kayaked down the river to the Pasil confluence. We then spent the next few hours driving up the Pasil value to get a better look, before deciding that the level wasn't right and changing our plans once again. Day 19 was spent in the baking sun paddling the rest of the Chico down towards Tabuk, simply for completeness. With all of the whitewater of the Chico (apart from Death canyon) ticked off, we were pleased but itching to go further afield, ideally into the province of Abra on the other side of the ridge from Sagada. Unfortunately our driver wasn't happy to go over the mountain pass as he said the roads are treacherous, not only due to landslides, but due to the clans that live in the pass who are known to be hostile to strangers, including fellow Filipinos. Unable to convince Eddie otherwise, we drove back to Sagada and then spent Day 20 driving towards Bangued, Abra, via the southern roads. Along the way we stopped for a hike to a secluded waterfall for a swim (freshwater) and then visited the beach to swim in the South China Sea (salt water). Around 8pm we arrived in Bangued and met George Lalin. George is the adviser to the Congressman for Tourism (though we first thought he was the congressman himself, and he wasn't in any hurry to clarify). He was instrumental in helping us get access to some more remote rivers in Abra by accompanying us to rivers and explaining to locals. That night we slept with the luxury of air conditioning in a hostel that he has organised for us.



*A quick swim in the sea!*

### Day 21-22 – The Ikmin and river crossings

Well-fed and well rested, half of the team spent the day in conversation with George and his friends, discussing logistics, while the rest of us explored Bangued by motorcycle and sidecar (which involved only a small crash with no injuries)! In the afternoon we drove to Boliney and were treated to another homemade meal and free accommodation. On Day 22 we paddled the Ikmin river, complete with army escort to the put in to protect us from any of the rebels that are rumoured to have a base higher up the valley. We felt in safe hands and enjoyed the celebrity experience. George is actively trying to promote tourism in Abra and hired a drone (with cameraman) to film us on the rapids. We took out

from the river at Dagioman and climbed up the steep slopes to the road in the basking heat, only to be informed that a landslide had blocked Eddie from getting to us. Thus we lugged our kayaks back down to the river again and paddled swiftly down the 3 km to the next village, getting to the Jeepney as quickly as possible before the afternoon monsoon rain hit, which could destroy the roads further.



*Jiri enjoying some of the company of our escort*

In line with our plans, we continued driving into the early evening to a known crossing of the Abra River, which here was a broad, flat expanse of water. To our amusement, the crossing involved a ferry which consisted of four metal canoes, welded together with wooden planks on top and an engine at the back. Our jeepney fit snugly on top, with little room to spare and we powered across to the opposite bank to continue our journey. Several hours later, and in total darkness, we came across another river that proved to be more of an issue. The bridge connecting the two sides had collapsed and there were no ferries here. Fortunately George had foreseen that this may be an issue and there was a truck waiting for us on the opposite bank. We unloaded our kayaks and gear from the jeepney and left it locked up, before traversing the river by the remaining footbridge. While we were grateful for the replacement vehicle, we had to squeeze all the boats, gear and 12 people into the bed of the truck, with the drivers and guide sharing the cabin seats. It was certainly an unexpected night-time adventure. Once again, we were welcomed into a Barangay hall (this time with beds!) and were glad of a roof over our heads.

#### Day 23-25 – The end of my trip

Our journey across the river was met with disappointment in the morning when we discovered that the river we had journeyed to paddle was empty. Not wanting to waste the trip, we heeded advice from locals and hiked up the mountainside to check out a waterfall. The weather was once again very humid and after an hour of hiking, we were grateful to swim in the pristine water at the base of Basakal

falls. The waterfall may have been paddleable but we all decided that it wouldn't be worth hiking in with kayaks just for the single drop. We slowly made our way back via the river by canyoning, which was great fun, and then headed back to the river crossing to return to our beloved Jeepney. That night in Dagioman I wished the rest of the team farewell and good luck and departed with George. He took me to his home to meet his wife who had specifically prepared vegetarian food for me, which was delicious.

The following day George and his wife took me with them to the ancient (in Filipino terms, but only 300 years old) city of Vigan by the coast. I was treated as an important guest and felt honoured to be made so welcome as they introduced me to their extended family and showed me some local delicacies (which were not so delicious!). That night at 9pm I took an overnight bus from Bangued to Cubao, and a taxi from Cubao to Manila airport. I arrived in the airport at 5am, 13 hours before my flight, leaving me plenty of time to reflect on the trip.



*Canyoning back to the village from Basakal falls*

### Day 25-30 – More rivers

Safely home on British soil and resuming my PhD studies, the rest of the team had 3 weeks remaining in the Philippines and weren't yet giving up on finding more exciting rivers. In the days following my departure the team paddled the Utip a couple of times but were unlucky with the Buku and Abulog Rivers which didn't have enough water. More fortune was found on the Upper Pasil, although the short 50 minute section required a 3 hour walk in with kayaks! The team then returned to base camp for a rest.

### Day 26-30 – Another Typhoon

Another Typhoon hit Luzon bringing some much needed rain to raise the water levels and the team enjoyed high water laps on the Chico before driving to Ifugao and dealing with multiple challenges, including flat tyres and landslides. The Tanudan and the Upper Agno were also ticked off the list.

### Day 31-36 – Back to the Amburayan

The boys introduced Lauren and Jiri to the Amburayan River and the Naguey community. They then successfully paddled several kilometres of the filthy (but thrilling) Bued River. Lauren and Jiri then made their way back to Manila to return home to the UK.

### Day 37-45 – The end of the expedition

The remaining 4 successfully navigated 27 km of the Ibulao River in Ifugao. The last day of kayaking was spent on the first river we paddled: The Upper Chico. This time the boys enjoyed some old-school boats courtesy of Steve, our Sagada contact, who also bought Erik's kayak. The other kayaks were sold to a local American-Filipino and we hope they'll be put to good use. The final day in Sagada was spent canyoning rather than kayaking before the team finally journeyed back to Manila and flew back the UK.



## 6.2. Estimated Final Costs

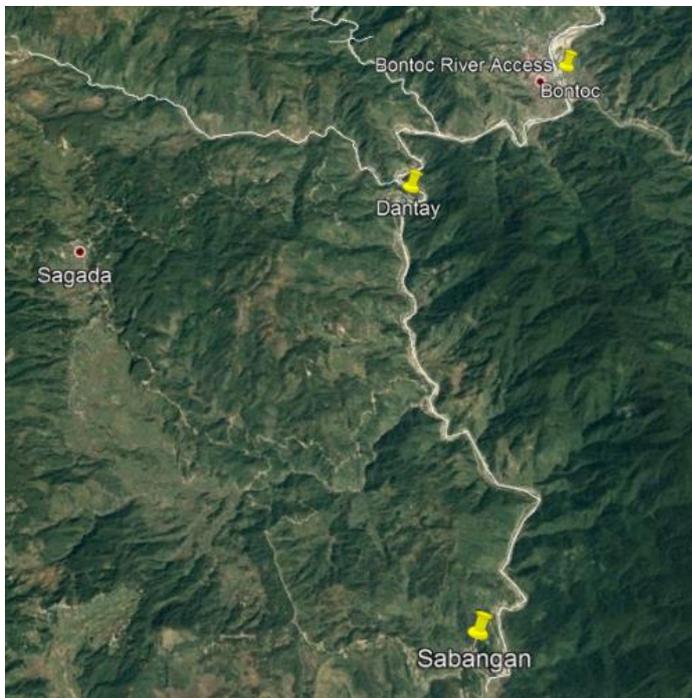
<b>Item</b>	<b>Cost</b>
Flights (x7)	£2800
Vaccines (x7)	£1000
Visas (x6)	£200
Transport	£2000
Accommodation (x7)	£60
Food	£1400
Additional Equipment (x7)	£6500
<b>Total</b>	<b>£14000</b>

Total cost of the trip came to around £2000 per person. With the funding from the Exploration Board, other British Universities, and the Lord Mayor of London, personal expenditure was reduced to £1450. The reduced cost of the trip can be mostly attributed to cheaper accommodation (which we only paid for on two nights!), and fewer vaccinations needed, as most of us were already vaccinated against the majority of diseases.

**7. RIVER NOTES**

**7.1 Mountain Province**

*UPPER CHICO*



Sabangan – Dantay

Length: 10 km

Gradient: 13 m/km

Grade: 4

Get-on: Driving through Sabangan, there is a tributary under the main road bridge. Put on there and paddle 200m down to the Chico. If you aren't hitting any rocks on this stretch then you're going to have a high level on the Chico. (17° 0'43.24"N // 120°55'34.17"E).

Take-out: Just downstream of the road junction to Sagada there is a track on the right of the road that leads down to the river. Park on the road at the top of the track and walk down. (17° 4'34.21"N

//120°56'49.32"E).

Time taken: 45 minutes – 1 hr 30 minutes depending on the level

Description: A great section to kick-start any trip. Everything is good to go at time of writing, but many rapids change every year due to typhoons. Pool drop style with lots of fun rapids. As the level gets higher there are some pour overs you'll want to avoid, but everything remains read and run. Paddling this section in high water immediately after a typhoon is extremely fun big volume paddling. Post-typhoon it has some of the biggest, paddleable whitewater in Luzon.



*Rainy season, low/medium flows*

Dantay – Bontoc

Length: 7 km

Gradient: 10 m/km

Grade: 3 (4)

Get-on: Just downstream of the road junction to Sagada there is a track on the right of the road that leads down to the river. Park on the road at the top of the track and walk down. (17° 4'34.21"N//120°56'49.32"E).

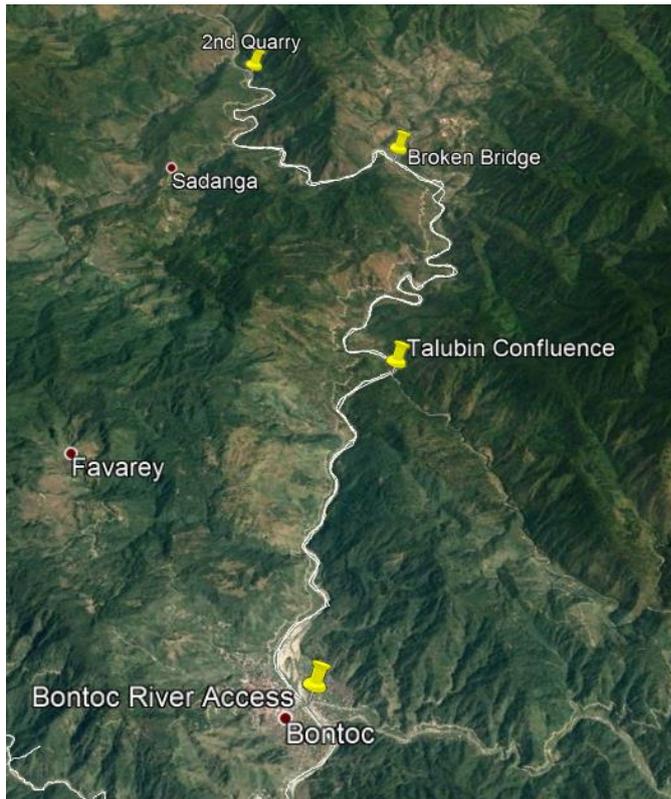
Take-out: River right at the main road bridge in Bontoc. A vehicle can drive all the way to the river. (17° 5'14.43"N//120°58'46.68"E)

Time taken: 1 hour

Description: One notable rapid, but apart from that it is all read and run. Mainly grade 3 pool drop. In high water everything steps up to grade 4/4+. We always found we had time to paddle Sabangan all the way to Bontoc in a morning or afternoon.



*Bontoc take-out*



### Bontoc – Betwagan (Broken Bridge)

Length: 17 km

Gradient: 8 m/km

Grade: 4/4+

Get-on: River right at the main road bridge in Bontoc. A vehicle can drive all the way to the river. ( $17^{\circ} 5'14.43''N//120^{\circ}58'46.68''E$ )

Take-out: River left 100m before the big broken bridge. If you've got metal rods coming through your boat, you've gone too far! (The bridge was submerged enough to paddle over the middle when we were there... inspect first!). ( $17^{\circ}8'36.47''N //121^{\circ}3'34.27''E$ ).

Time taken: 3 hours

Description: Much more constricted than the section above. Some narrow rapids that feature slots. All good to go. Don't do this section with too much water. Apparently the gauge at Bontoc bridge can move around, but we wouldn't recommend doing this section above 1.1. It doesn't need a lot of water to make it challenging due to its constricted nature.



*Gareth running one of the more constricted rapids*

### Betwagan – Chap-ay

Length: 7.5 km

Gradient: 8 m/km

Grade: 3/4 (4+)

Get-on: Follow the track from the road down to Betwagan and walk down over the rocky slabs on river left above the broken bridge. (17°8'36.47"N//121°3'34.27"E)

Take-out: The second quarry on river left. Do not miss the take-out or you will end up in an un-run section of the Chico dubbed "Death Canyon". (17°10'36.33"N//121° 3'37.59"E)

Time taken: 2 hours

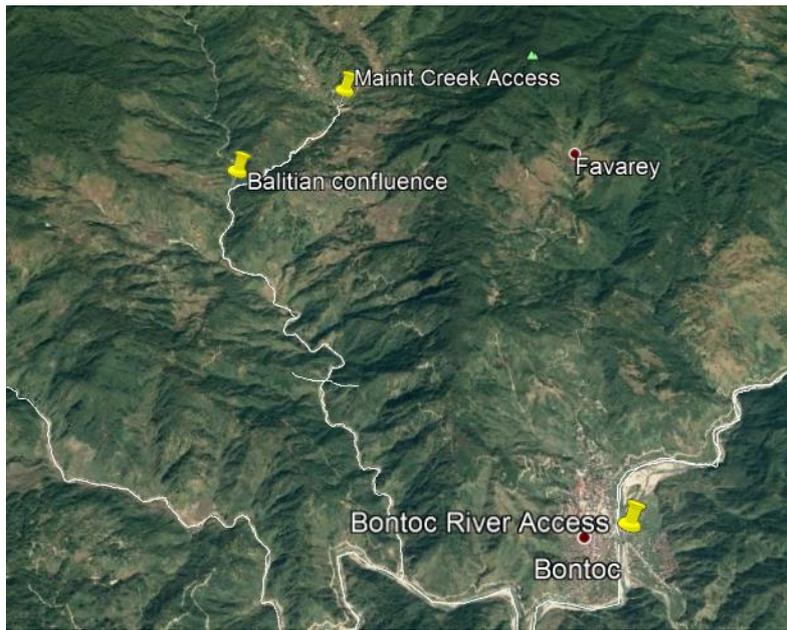
Description: A very scenic gorge run with one notable rapid (Jaws) 1km before the take-out. This rapid is more constricted than the others in this section. Although the road never actually goes that far away, this section feels much more isolated than those above. A couple of rapids might require scouting, but there are no portages and most of it is read and run grade 3/4.



*Jaws Rapid*

### Death Canyon

The whole river constricts to a few metres in a box canyon with angled walls and 90 degree bends effectively creating a ceiling. It cannot be scouted. The entrance rapids look amazing and parts can be inspected from the road, but are still grade 5/5+ and any mistake would leave you in Death Canyon. Running the entrance rapids would mean a steep walk up the bank and would require ropes.

*BALITIAN*

Length: 9 km from Mainit to the Chico confluence, and another 4 km to Bontoc.

Gradient: 24 m/km (Mainit Creek: 50 m/km)

Grade: 4/4+ (X)

Get-on: Road bridge in Mainit (17°8'47.61"N/120°57'28.76"E). There is a ditch (Mainit Creek) below the bridge. This ditch is one option to get to the river. Mainit Creek has dirty water and contains five portages, but it's worth it to paddle the Balitian. If it's anything other than very

high, you'll have to find another route down to the river. There is potentially a footpath down to the Balitian on the far side of the village, this might be a better option and quicker than the creek but you would have to ask around. The Mainit creek joins the Balitian at (17°8'7.93"N//120°56'38.00"E).

Take-out: River right at the main road bridge in Bontoc. (17°5'14.43"N//120°58'46.68"E)

Time taken: 7 hours, including 2 hours spent on Mainit Creek.

Description: Mainit Creek has some technical rapids, some clean drops, and some downright horrible sections that will need to be portaged. There is a short slot canyon which has a manky entrance but you can seal launch into it instead. The creek looked scrappy but runnable from the get-on.

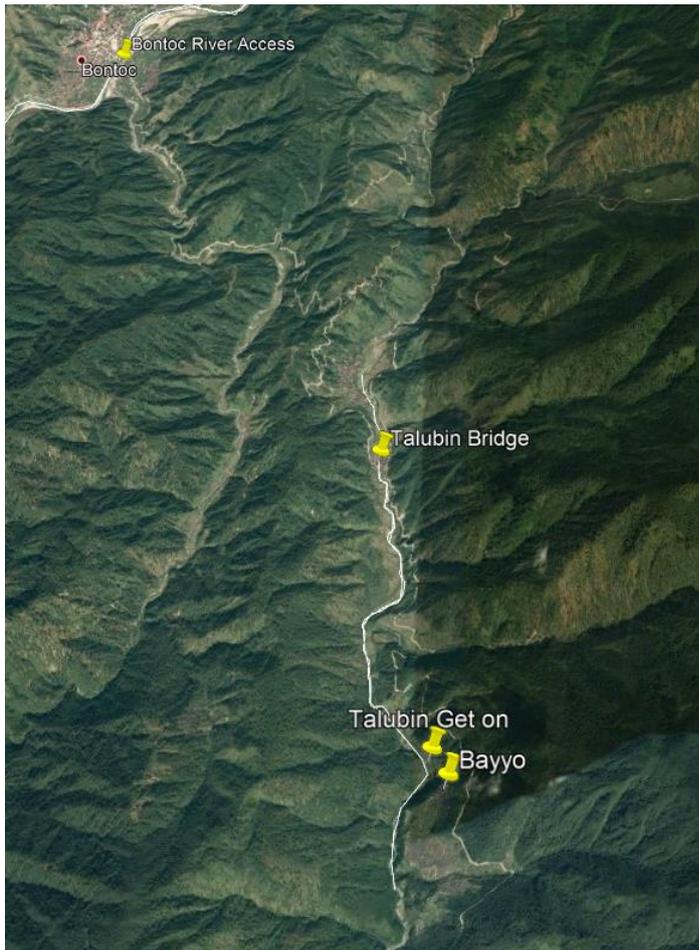
Once you reach the Balitian the volume is much higher, the rapids are much cleaner and you no longer have to worry about rocks. We paddled it after several days of rain, and it rained throughout the day. It could probably be paddled slightly lower as well – just a bit less cleanly. Long grade 4/4+ rapids make it a thrilling run. Everything can be scouted.

After 1.2km of great whitewater, you'll see a trib joining on river right signalling the one and only portage on the Balitian. We portaged over this trib so that we could put back on below the river wide hole and slide down the chicken shoot hard river right. The hole wasn't as sticky on river right, but the big boil coming out of the pocket hard right might flip you leaving you with very little time to roll up before being against the boulder. You could set safety where we got in if someone did want to paddle it. A swim would result in you ending up in the huge siphon created by two house size boulders. We didn't want to risk it. This portage took us almost 2 hours, but a lot of that time was spent working out how to go about it.

Immediately after the portage there is a long rapid with a line that snakes from side to side, avoiding holes and siphons. One of the best rapids on the river. From here the quality of whitewater doesn't drop. To paddle the Balitian there pretty much needs to be a typhoon in the area, meaning when you reach the Chico it is more than likely to be massive. Enjoy the monstrous waves down to Bontoc.



*Boofs on the Balitian*

**TALUBIN**

Length: 3 km

Gradient: 28 m/km

Grade: 3+

Get-on: From Bontoc, drive up to the village of Talubin to check the level under the bridge. If it looks good from here follow the road upstream on river right until you reach Bayyo. As you approach Bayyo, there is small track on the right which you need to walk down. At the end of the track you can make your way over the rice paddies to the river. The walk took us 1 hour. It's not a long way, but it's steep and paddies are very difficult to manage with a boat on your shoulder! Watch out for the rat traps! (17°0'34.51"N//121° 0'57.20"E)

Take-out: River left before the road bridge in Talubin. (17°2'12.45"N//121° 0'37.21"E)

Time taken: 1 hour walk-in, 30 minutes paddle.

Description: A fast, alpine-style blast. Continuous, but not major rapids.



*Strenuous walk-in*

*TANUDAN (Upper Section)*

Length: 11 km

Gradient: 26 m/km

Grade: 4 (6)

Get-on: Barlig, a 1 hour drive from Talubin ( $17^{\circ}2'20.26''N//121^{\circ}6'5.30''E$ )



Take-out: River right at the hanging bridge in Lias ( $17^{\circ}5'1.61''N//121^{\circ}8'33.39''E$ ). You could also take-out at the main road bridge 3km before if you are short on time.

Time taken: 3 hours 30 minutes. Note that after the main road bridge the final 3km takes at least 1 hour. We found out afterwards that the final 3km had not previously been paddled.

Description: It starts with very low volume rapids which leaves you questioning if there is enough water, but as various tribs join, the river picks up and what follows is some fantastic grade 4 steep creeking, especially after the main road bridge. Watch out for the portage soon after the road bridge. Portage river right and lower the boats down.

The middle section of the Tanudan has never been run, but is extremely remote, contains several slot canyons and is 40km long. The lower section, from the village of Tanudan to the Chico has been run before but the road from Tabuk to reach the get-on is apparently more problematic than the run itself.

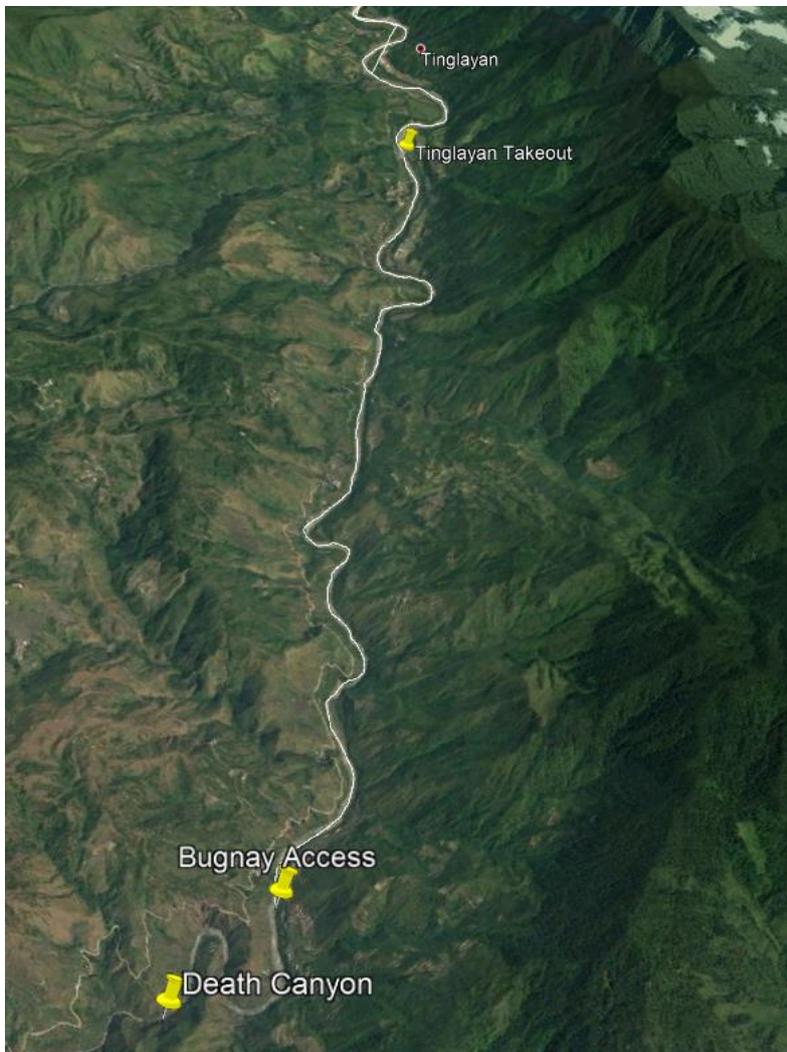


*First main drop on the Upper Tanudan*

**7.2 Kalinga**

*LOWER CHICO*

Bugnay – Tinglayan



Length: 10 km

Gradient: 8 m/km

Grade: 3

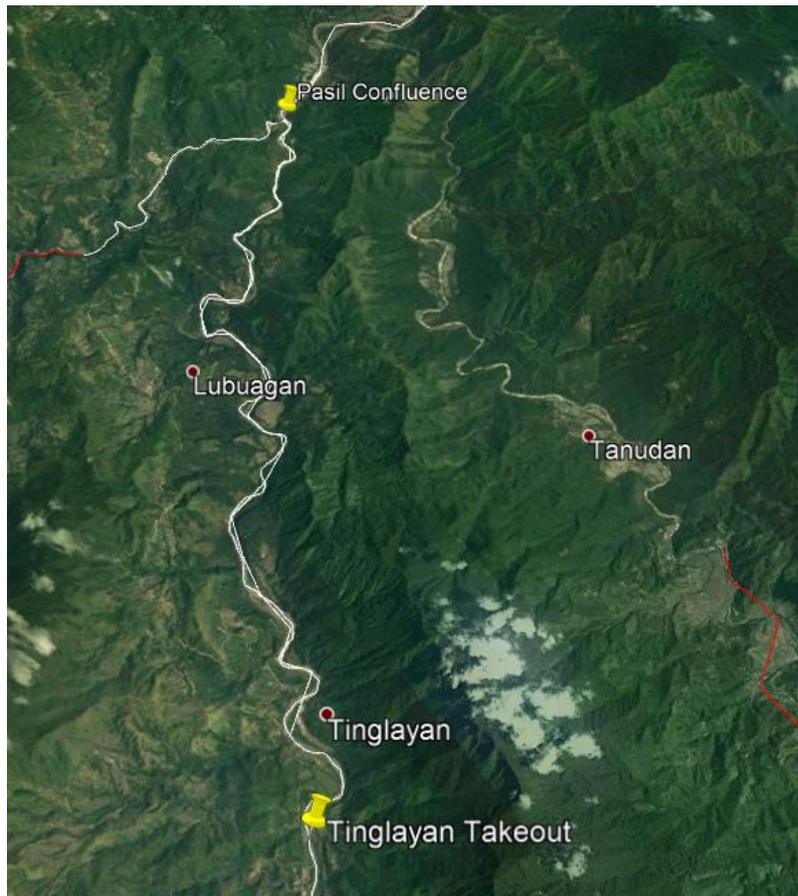
Get-on: Ask the locals for the path down to the river in Bugnay. Cross the hanging bridge and get on river right. (17°12'2.47"N//121°5'25.47"E)

Take-out: River left in Tinglayan. There is a path up concrete steps to the road. Alternatively, paddle a few more hundred metres and take out at the riverside quarry on river left (much easier). (17°16'10.75"N//121°9'13.54"E)

Time taken: 1 hour

Description: Nothing difficult, pool drop grade 3 with some play spots. Some flat sections. It would be a good choice when the Chico is in flood.

### Tinglayan – Tomiangan (Pasil Confluence)



Length: 25 km

Gradient: 8 m/km

Grade: 3/4 (4+)

Get-on: To save you walking down the steps in Tinglayan, you can drive a few hundred metres down the road and get on at a riverside quarry. (17°16'10.75"N/121°9'13.54"E)

Take-out: The confluence of the Pasil and Chico (17°23'41.77"N //121°13'53.95"E)

Time taken: 4 hours

Description: A fun, scenic section with some big rapids, but mostly pool drop grade 3+/4. One bedrock-shelf rapid which comes up on you quickly in the second half of the run (4+) is the crux. Can be avoided in a

left channel. The road goes up and away from the river for most of this section which gives it a remote feel.

We paddled the Chico sections below Bontoc in a fairly dry spell without much (if any) rain. Paddling these sections in wet conditions would add to the grade substantially. We paddled from the Pasil Confluence to Tabuk the next day for completeness, some fun big volume rapids but the gradient drops throughout the section and is eventually mostly flat, shingle rapids.



*Erik, charging*

Pasil (Upper Section)

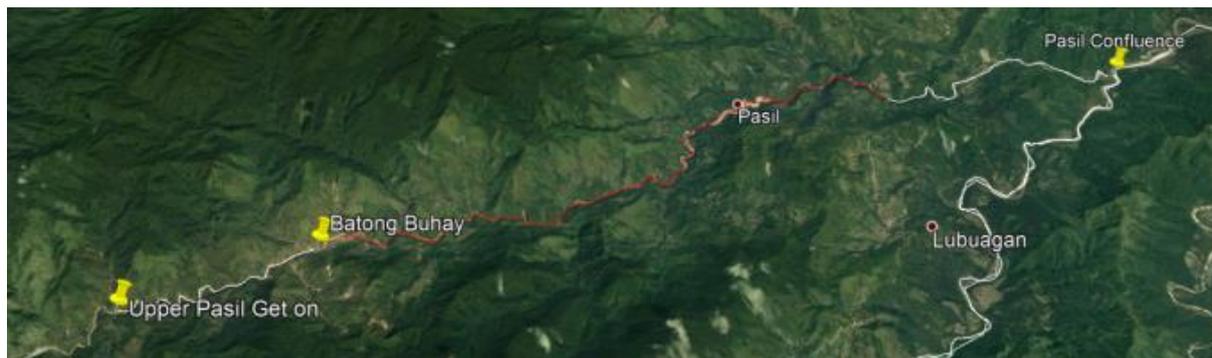
Length: 5 km

Gradient: 30 m/km

Grade: 4 (X)

Get-on: Drive up the valley to Batong Buhay. Walk 3 hours up the track on river right until the path comes down next to the river. We took a guide, but you could probably go without a guide (if they'll let you). (17°19'54.04"N//121° 2'9.48"E)

Take-out: River right in Batong Buhay. (17°20'46.92"N//121° 4'8.35"E)



Time taken: 3 hour walk-in, 50 minute paddle

Description: Very continuous with one portage in the first kilometre. High-alpine style. Small eddies. The sulphur in the water has given the banks an impressive gold/ brown colour, but the smell is potent by the end. The Pasil provides a very different landscape to most rivers in the Philippines.

Hard to justify the walk-in for the length of paddle, but if there was a lot of water it would be a thrilling (terrifying) blast. We had enough water to make it paddleable, but it would only have gotten better with more. The river below this section, dubbed "The Middle Pasil", has been run in part by a previous group, but they climbed out. It runs through an extremely steep sided gorge with stories of 20 ft waterfalls in slot canyons. Got a drone? This is one for you!



*The long walk in*

### 7.3 Abra

*IKMIN*

Upper Ikmin/ Boliney Rapids

Length: 2km

Gradient: 17 m/km

Grade: 4+



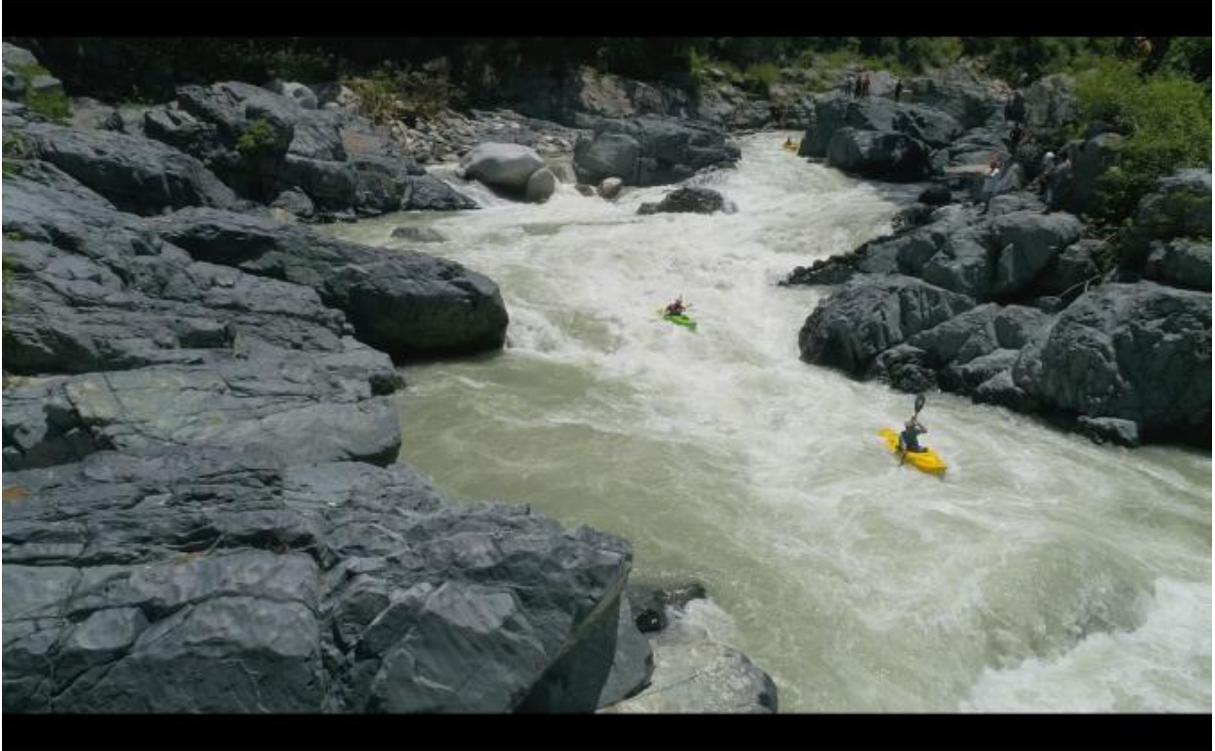
Get-on: Above Boliney there is a bridge with shingle banks on river left. (17°22'45.24"N //120°49'29.58"E)

Take-out: At the hot spring on river left, unless you want to run the 15ft slot-drop which piles into a cave. There is a concrete path down to the hot spring from the road. It's worth scouting the take-out before paddling the section, and it's on the way to the get-on anyway. (17°22'44.42"N //120°48'15.72"E)

Time taken: 2 hours

Description: A gentle 1km paddle down shingle rapids leads to a big S bend. You get a glimpse of this from the road. This is where it gets interesting and requires scouting. There are plenty of eddies, but if something went wrong near the end, the consequence would be potentially swimming the cave drop below the hot springs and/ or losing all your gear.

The first rapid of the S bend is the longest. Some of us went left and some right at the start, there are several options. After this there is a river wide ledge drop with a strong towback that you want (need) to boof hard right over. Setting safety here is recommended. A couple more rapids keep the adrenaline levels up before taking out left next to the hot springs, which are boiling hot.



*The Ikmin from the air*

Lower Ikmin

Length: 11 km

Gradient: 14.5 m/km

Grade: 3+



Get-on: 200 metres after the path down to the hot springs, there is another path leading down to the river. (17°22'43.22"N//120°48'5.52"E)

Take-out: 3km below Dumogas (the first settlement you see from the river) take out river right below a hanging bridge. Walk across the sketch bridge to find the main road. (17°25'49.35"N//120°44'51.74"E)

Time taken: 2hours

Description: Not as challenging as the Upper section, but still a worthwhile run if you're in the valley anyway. Numerous grade 3 rapids and an open style of river. Towards the end it flattens off. In high water it would be a good blast.



*The unrunable slot drop below the hot springs*

*UTIP*

Length: 8 km (+ optional 4 km)

Gradient: 17.5 m/km (10 m/km for optional 4 km)

Grade: 4/4+



Get-on: Below Kili Falls ( $17^{\circ}16'9.95''N//120^{\circ}47'59.68''E$ ). At the right water level, the falls might be runnable. However, the landing is an unknown depth, with big slabs in it. Note that Kili is marked as Baklingayan on Google Earth. Baklingayan is actually the next barangay up river.

Take-out: The best paddling is in the first 8km so if you want to get out after that, take out at the road bridge next to Timpo sitio (Dakit bridge /  $17^{\circ}16'34.72''N//120^{\circ}44'44.17''E$ ). To paddle the full 12km, take out at Poblacion, which is marked as Mayabo on Google Earth ( $17^{\circ}15'32.31''N //120^{\circ}43'30.56''E$ ).

Time taken: 2 hours

Description: After scouting the falls, get on in the pool below and almost straight away you're into the action. A narrow, constricted rapid gives you a taste of the action downstream. The water is incredibly clear, all the lines are clean and the palm trees that line the banks add to the paradise feel of the river. It's a beautiful river to paddle and the whitewater is top quality. Although no individual rapid is massively technical, there are so many fun boofs that we can guarantee you'll be smiling the whole way down. The optional 4km after Timpo is grade 3/3+ with nothing especially notable but some fish traps to admire. We paddled the Utip and the Ikmin during an unseasonably dry spell and these rivers had great levels, these sections were going when others weren't.



*Peter boofing on the Utip*

## 7.4 Benguet

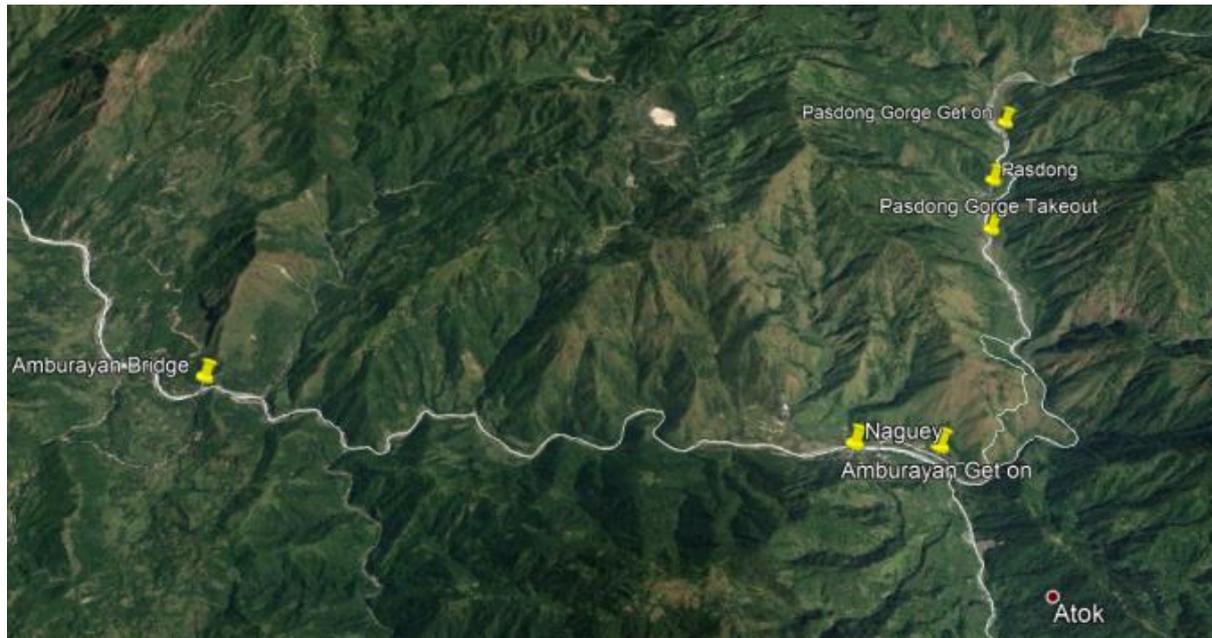
### AMBURAYAN

#### Pasdong Gorge

Length: 1.6 km

Gradient: 46 m/km

Grade: 4+(5)



Get-on: Drive up from Naguey on river right, past Pasdong and stop at the first set of rice terraces after Pasdong. There is an easy path to follow which leads to a bridge. Get on at the bridge. (16°38'10.04"N//120°42'43.15"E)

Take-out: River right underneath the first hanging bridge you reach after the main gorge. (16°37'18.93"N//120°42'23.51"E)

Time taken: 2.5 hours

Description: Steep creeking at its finest. This river is best done in a small group. After a very short warm-up the drop in gradient becomes very apparent as every rapid requires scouting. Make sure you hit the small eddies or else you'll be running the whole thing blind! Several steep boulder gardens lead into the main event which is easily scutable. Take the footpath on river right through the banana trees and scramble down when needed. You can also scout the rapid before putting on the river by taking a footpath in the centre of Pasdong (next to the shop) which follows the aqueduct down to the rapid. If this rapid looks a good level, the rest of the run will be good to go.

The main rapid (a Triple Combo) is as follows. Most of the water channels down river left, but the slot that it leads to doesn't look appealing. Erik was the only person to run this rapid and went off the flake on river right before cutting left before the big rock which has all the water piling into it. Next up there is a double hole feature before the final drop. From here there are several more nice rapids ('Nose job' slot) before the river widens and the take-out bridge comes into sight.



*Peter in the boulder garden*



*Erik in Pasdong gorge*

### The Middle Amburayan: Naguey – Taba-ao

Length: 9 km

Gradient: 17 m/km

Grade: 4/4+

Get-on: River right next to the road bridge in Naguey. It's a 2h 30m drive from Baguio. (16°35'54.59"N//120°41'43.86"E)

Take-out: Taba-ao, river left just before the road bridge. (16°36'44.67"N//120°37'56.17"E)

Time taken: 3 hours (it could be done quicker but the drive around takes 3 so make the most of it)



*The community values the river too*

Description: An excellent run with an exciting gorge for starters and several surf waves later on. The short gorge contains the most technical rapids of the river, the rest eases off a bit so you can relax. Crystal clear water in a remote setting. If the drive wasn't so long we'd have lapped it all day. The grade given is for decent juicy flows. The river is paddlable with reduced flow (many rocks visible at get on) but drops a grade.

The Naguey community are incredibly friendly so if possible arrive the night before to spend time with them and maybe even bring them a chicken to show your appreciation for their hospitality.

Below Taba-ao we were told of large falls and even larger boulders in deep canyons. Whilst sometimes it is worth taking a pinch of salt with these stories, google earth seems to back them up. Massive boulders are visible in especially tight sections of river. 40 km of un-run whitewater exist below Taba-ao, it would be incredibly technical and very committing but potentially world class. Similarly the gorge above Naguey houses some big rapids in an almost completely inaccessible canyon. The team are

pretty convinced there is a waterfall in there somewhere as massive boils were seen rising in a pool from the road. We inspected the first few hundred metres of the canyon and all was good, but could not proceed further on foot. It is probably possible to scout the whole thing if you are willing to commit the effort by walking into lots of different points... or just splash the cash on a drone.



*My favourite river*

## AGNO

Upper Agno Part 1

Length: 4 km

Gradient: 22.5 m/km

Grade: 4/5 (5+)

Get-on: Pacso barangay, at a road bridge after a right turn off the main road. There is a confluence of the Agno with another river coming in from river right here. (16°39'39.04"N//120°48'59.67"E)

Take-out: Kabayan Barrio, the first major bridge you come to. You can sleep in the village and continue the river the following day. (16°38'7.39"N//120°49'20.98"E)

Time taken: 2 hours

Description: Lots of water with big boulders. Ledges and shelves but all possible to scout. Within 100 metres the first rapid is upon you. We all portaged this one as it looked a bit sketchy, but it might go. The next rapid is long, runnable and weaves through some hefty boulders. It can be scouted by climbing up to the rice paddy on

river right and walking to the hanging bridge. This was a good level and was two days after a typhoon. It could also be run slightly higher/ lower. The Agno rises and falls quickly as it drains agricultural land. It appeared to be the type of river that would change regularly with typhoons because there are so many boulders on the riverbed.



*Erik in Grade 5 Boulder Garden*

## Upper Agno Part 2

Length: 7.5 km

Gradient: 33 m/km

Grade: 4(4+)

Get-on: Kabayan Barrio. It makes sense to do the Upper section first, then continue onto this section. We would have done the Upper and Lower on the same day but we started the Upper too late in the day so we slept in Kabayan Barrio after the completing the Upper. (16°38'7.39"N //120°49'20.98"E)

Take-out: The next barangay; Adaoay. Before doing the last two rapids below the bridge, scout on river right and from the bridge. (16°35'7.84"N//120°50'1.96"E)

Time taken: 4 hours

Description: Numerous good rapids. Similar boulder style to the Upper section, but rapids are generally shorter. Lots of scouting required. Very fun whitewater climaxing with a grade 4+ set of steep rapids right before the takeout in Adaoay.

There appears to be an extra 1 km of white water below this take-out that could be interesting. From high up on the road after we paddled this section we could see large-ish rapids formed by bedrock. There also appears to be a road following the river, river right below Adaoay that could lead to a slightly lower take out and allow the remaining rapids to be run.



*Erik on the Agno*

*BUED*Upper Bued

Length: 6 km

Gradient: 30 m/km

Grade: 5 (6)

Get-on: Camp 5 bridge #1, 50 metres downstream of a collapsed steel bridge sticking out of the water. (16°20'23.35"N//120°37'4.59"E)

Take-out: Driving away from Baguio there is a right hand turning sign posted 'cave'. Take this down to the river (N 16.287490// E 120.584591). Scout the take-out because you don't want to continue downstream into the unrunnable grade X section. This unrunnable section divides the Upper and Lower Bued and can be seen from the road.

Time taken: 3 hours



*Erik and Gareth running "go left or die"*

Description: Not known for its good water quality, there is a reason we think Bued stands for 'Baguio's Urine and Excrement Ditch'! We came across all sorts, from IV drips to light bulbs. However, despite the water quality, this is still a very worthwhile section thanks to its gorgy nature and committing must-run (grade 5) rapids. Two are directly under a large road bridge so worth a look before putting on (16°19'13.18"N//120°36'53.40"E). The other, "go left or die", runs exactly as it sounds and can be easily inspected from the bank.

The Bued rises and falls very quickly. We were on the river for 3 hours and the river rose significantly in this time. Much lower and it would be a scrape, too high and it becomes a boily mess of grade 5+ monstrosities. We paddled this section after a night of very heavy rain in La Trinidad. It continued to be wet the next day with heavy rain when we were paddling. Don't let the satellite imagery fool you – it may be very close to the road, but the river lies in deep gorge and there are very few access points.

## Lower Bued



Length: 7 km

Gradient: 18 m/km

Grade: 4/4+

Get-on: First hanging bridge after the unrunnable section which can be seen from the road. Park on the side of the road and follow the path down to the river. (16°16'38.95"N//120°34'11.90"E)

Take-out: When the boulder gardens have disappeared, the river flattens out. Take out at the second quarry on a large shingle bank river left. (N16.239900//E120.525995)

Time taken: 3 hours

Description: Easier and less constricted and committing than the upper section but with more volume and some chunky rapids to keep everyone on their toes. Generally big boulder style rapids which require a quick scout.



*The lower Bued*

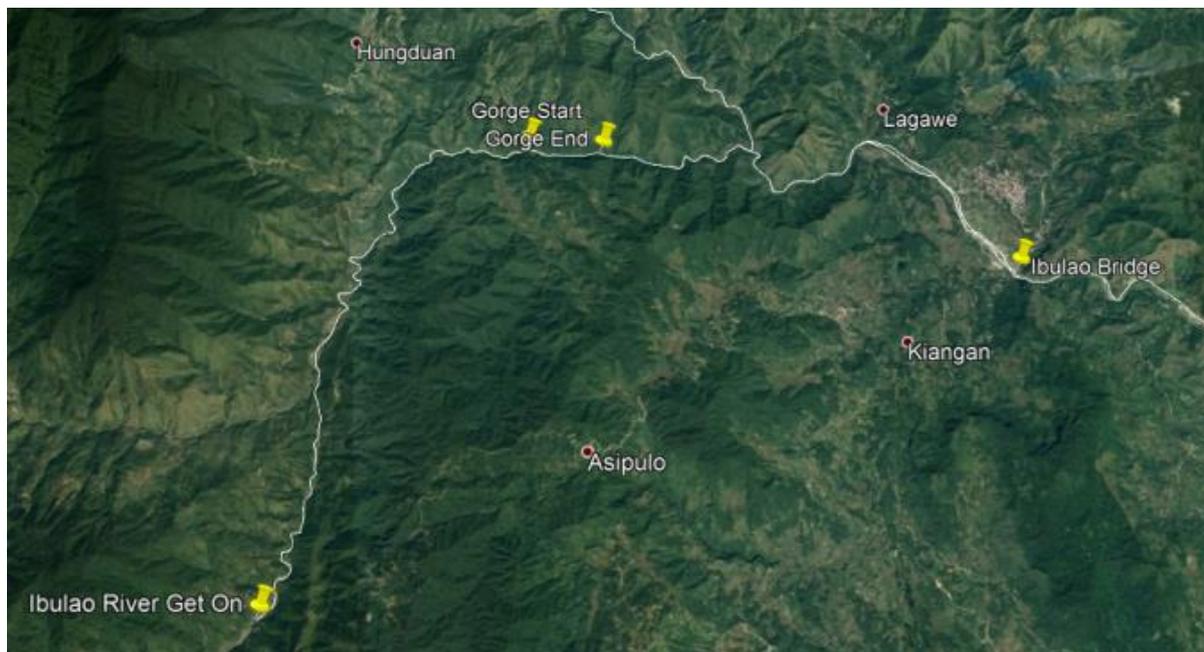
## 7.5 Ifugao

### IBULAO

Length: 27 km

Gradient: 43 m/km for the crux 3 km in the gorge

Grade: 5 (6)



Get-on: Binablayan. The path down to the river takes 30 minutes to walk from where the road ends. (16°43'48.40"N//120°58'56.67"E)

Take-out: Ibulao bridge (the main road bridge near Lagawe) or 4km upstream at a smaller bridge. It's much easier to direct a driver to the main bridge (16°47'3.38"N//121° 7'16.38"E). The drive takes 4-5 hours so take some cash for the shops at the take-out as you'll be hungry after 27km of paddling!

Time taken: 7 hours

Description: Remote, committing and stacked with good rapids, this a great run if you have the right group. After 15 km of an array of low volume shingle rapids, mini gorges and the odd boulder rapid, you arrive at the gorge. You will know when you have arrived as the shingle rapids disappear and the boulder gardens begin (16°48'45.58"N//121° 1'51.55"E). For the next 3 km you will be scouting almost every horizon line, which means jumping out of your boat more or less every 50 metres. The rapids are defined, but it's continuous and missing an eddy could be fatal. Siphons are lurking on several corners. If you can keep them in the back of your mind and focus on the white-water boat riding you'll be in for a grand time. This run has stunning the jungle scenery and beautiful canyon walls.

There is one large boulder choke portage to be aware of. The portage is short and easy on river left. Eventually the boulders subside, the river opens out again and the shingle rapids return. Don't chill out too much as there are still some fun read-and-run grade 4 rapids to come.



*Having fun*

## **8. POST EXPEDITION**

### **8.1. Impressions**

Overall I would consider our expedition to have been very successful. The team tackled a large number of sections, including the completion of 12 first descents, and were able to enjoy some incredible whitewater, ranging from Grade 2-5+. In particular, we were pleasantly surprised at the generous and welcoming nature of the vast majority of local people we came into contact with. Even those in the rice paddies and farming communities were keen to help in any way they could or offer what little they had to share. I feel humbled to have met such open people.

Paddling in the monsoon season presents a number of challenges that we were aware of before our departure, including frequent landslides, changing water levels and access issues. However, it proved not only necessary for most of these rivers to run, but also an exciting time to be in the country. Life continues around the calendar but there was very little sign of tourist while we in the Philippines, even in the larger towns such as Baguio. We felt privileged to experience how people live in Luzon and be welcomed into homes, communities and Barangay halls. The British Universities Kayaking Expedition has once again succeeded in exposing another hidden corner of the world that others may take note of and explore for themselves. The province of Abra is keen to expand their tourism industry and would be happy to welcome and support more kayakers who decide to journey there, and indeed there are more rivers on our list that we did not manage to tick off, either due to issues of access, time or water level. I would encourage others to take up the baton and expand on the river notes we have listed here. A word of warning to any brave enough to face the Filipino monsoon; these rivers are likely to change and thus kayakers must judge rapids, rivers and get-ons/take-outs first hand rather than relying solely on our notes, which can only act as a guide. Be wary of advice from locals as well - often they have an detailed knowledge of the area and can provide useful information regarding river access and weather patterns, but a beautiful 3 metre drop and an un-runnable 10 metre waterfall can both be 'too dangerous' or 'a little drop' depending who you ask. Always scout where possible.

Finally, on a more personal note, I found this expedition very challenging due to struggles with time commitment. As a PhD student working long hours, I was not able to effectively train for the trip and noticed the strain that it had on me, mentally as opposed to physically, as I didn't feel as confident as the others who had been using their long summers to get used to their new boats on some of Europe's most challenging whitewater. Ongoing mental health struggles and a team that aren't equally well acquainted made for some challenging days that I'd not foreseen, and while I am delighted to have been part of this exploratory trip, it was also relieved to return back to my studies after a month of travels. For any other Imperial students planning similar expeditions, I'd recommend meeting up with your team regularly if possible to form a strong bond before departure, allowing for a better understanding of the group dynamics and each other's strengths and weaknesses (which may be different from those they openly admit to!).

### **8.2. Impact**

For the most part, we hope that we have left a positive impression of British tourists on the locals we came across, and certainly they seemed open to the possibility of more kayakers travelling there in years to come. As mentioned previously, Steve purchased one of our kayaks, and 4 more were purchased by an American-Filipino named Rene. We hope that these boats will be put to good use and encourage others to take an interest in the sport. Both of these men have experience kayaking and safety gear was also sold to them with the knowledge that they have the adequate skills to be safe on water.

### 8.3. Media

Plenty of footage and photographs were generated during our expedition and we are still putting together our video series. We published several blog posts while in Luzon which can be found on our website:

<https://kayakthephilippines.wordpress.com/>

The link to our Facebook page, where are 1200 followers eagerly await the release of our next video, can also be found on the website. Aside from the group media, our sponsors have promoted our activity by sharing our posts and photos. Some of the team also presented the first episode of the video series at Teifi Tour festival in Wales in October, and another talk is to be presented in early December at a Gene17 kayaking event.

In the form of more personal documentation, I made a highlight video of my time in the Philippines which can be found at the following:

<https://vimeo.com/233184027>

## 9. ACKNOWLEDGEMENTS

First and foremost, we'd like to thank the British Universities Kayaking Expedition community for presenting us with this opportunity, and to all the other excellent candidates that voted us onto the team. We are very grateful for all the help we received with this expedition, from the planning stages in the UK, to river mapping, financial support and logistical advice. Our particular thanks go to Tim and Dave Burne of the 2005 and 2007 BUKE expeditions, respectively, and Callum Strong of the 2013 expedition. Acknowledgements are also extended to our sponsors, the University support we've received, and the Lord Mayor of London for his financial contribution. From within the Philippines we'd like to thank George Lalin and colleagues, and each of the Barangay communities that were kind enough to accommodate and feed us.

Finally, we would like to share our gratitude for the help of Steven Rogers who provided immensely valuable advice at several stages during the expedition (as well as fast internet and home-baked goods). Thank you.



*The Team*