Research for the real world

School of Geography, Politics and Sociology
Contributing to better understanding

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Foreword

The School of Geography, Politics and Sociology creates and disseminates knowledge in the fields of sociology and social anthropology, political science and international relations, and human and physical geography. Our academic staff - of which there are over 70 - teach undergraduate and postgraduate students (the School hosts 7 undergraduate programmes and 15 taught Masters programmes), supervise doctoral research students, and conduct their own research.

What is this research for, and why does it matter? The research we conduct is focused on the real world. It not only contributes to better understandings of the changing world around us, it means our students are provided with state-of-the-art interpretations and analysis in lectures and seminars. Much of our work is also for the real world, addressing important societal challenges, regionally, nationally and globally.

This brochure provides short vignettes of the research being undertaken by 12 of the School’s academic staff. These vignettes represent a small selection of the School’s overall research activity, but they provide examples of the research our staff conduct, and what it is for.

Immediately apparent is the diversity and extent of the School’s research that stretches from our doorstep in Newcastle and North East England to drawing upon field work carried out in Japan, Nepal, the Gulf of California, Bosnia, South Africa and Iceland. Our people have completed research that contributes to better understandings of how and why and how quickly climate change is occurring, work looking at the flooding events that are becoming more common in a warming world, and studies tackling ‘environmental justice’ and other ethical questions posed by human-induced global warming.

Other researchers are exploring the lives and circumstances of people often invisible in our complex society, including disabled young people and women trafficked for sexual purposes. The ways electronic media and popular culture are influencing political processes and outcomes and changing our culture and individual identity are being investigated in the School. Citizenship and appropriate models of governance in post-conflict nations are important contemporary issues tackled by our research. And in a time of profound economic and social change, work that challenges the dominant ideas of neo-liberalism through exploration of alternative cultures, ethical trading, and Islamic finance demonstrate the School’s research is highly relevant to pressing international concerns. Our research matters because it addresses issues, problems and people too often ignored.

The research highlighted in the following pages is research on the real world and for the real world. We hope you find it of interest.

Andrew Gillespie
Head of School and Professor of Communications Geography
e: andy.gillespie@ncl.ac.uk
t: +44 (0) 191 222 7731
The credit crunch that led to the near collapse of the West’s banking system still casts a long shadow over society and raises fundamental questions about the structure of financial services and how we use them.

Across the West, taxpayers continue to pay a high price for saving the financial system from itself. Yet the system, supported by governments, is apparently seeking to rebuild itself in the same image as it was pre-crisis.

For Newcastle University’s Professor Jane Pollard, Islam is an interesting lens through which to view the West’s financial system and its complex interaction with culture and society. There could be lessons the West can learn about social inclusion and financial responsibility.

The West has no issue with, say, banks charging interest on loans. This is not the case in the Muslim world. The charging of interest is forbidden by the Koran.

So how do Britain’s 3 million Muslims cope financially in a system which is closed to them on ethical grounds and how does the financial system respond?

“My interest in Islamic finance has accelerated post-credit crunch. Islamic financial institutions claim to have grander objectives than just making money out of their customers,” she says.

“They advertise a strong partnership ethos and are involved in the growth of their customers rather than simply the enrichment of the people who work for them. They also have a strong notion of social responsibility, particularly around helping the poor. There is a strong social inclusion agenda here.

“But Islamic banks in the UK have to operate in a UK regulated environment. I’m interested to see how long they can stay immune from the West’s financial culture and how far they may have to compromise their notions of social responsibility. Are they becoming mainstreamed? How assertive should they be in policing their boundaries?”

As well as looking at institutional dynamics, Dr Pollard is also examining Islamic finance at an informal level through the philanthropic networks in London’s East End.

“There are over 200 Muslim charities in London handling millions of pounds of donations. There are other financial networks as well but the flows of these monies and assets is not very visible.

“We will be interviewing mosques and households to find out where that money goes and what the implications might be for the creation of a more diverse financial sector and for the West’s financial system in the future.”

Could Islam provide any useful lessons for the West?
A lifelong fascination with urban culture, particularly as experienced by the young, has brought a mix of fame and infamy to Canadian-born Professor Robert Hollands.

His research has taken him from studying the pubs and clubs of his adopted home city of Newcastle, to the Prague fringe festival and the squats/social centres of Barcelona and Geneva, to discover the dynamics and often tense polarities between 'alternative' and 'mainstream' culture, and how the former can contribute to social transformation.

"I've always been interested in cultural alternatives such as squatting, fringe festivals, and early rave culture. They all imply a 'do it yourself' ethos, that are about challenging society rather than simply waiting for social policies or political change to just happen.

One of Professor Hollands' first pieces of research upon moving to Newcastle was to examine the city's vibrant nightlife culture. The project was ridiculed at the time by the media, with headlines like "Boozy Bob going on a £16,000 pub crawl" and its focus was misreported as far afield as the Egyptian Gazette.

"I do believe that this was one of the first ever studies of UK nightlife. My research findings challenged easy stereotypes of nightlife behaviour about sex and violence, and instead focussed on how rapid economic and social change was creating new forms of identity and community in the leisure sphere. Similarly, it contributed to changes in licensing laws and highlighted the central importance of nightlife economies to cities today."

Professor Hollands is currently conducting research in Geneva and Prague. Once the squatting capital of Europe in the mid-90s, Geneva has become a rather 'corporate city' catering largely to business people and diplomats, squeezing out any alternative nightlife places for its own young people. However, a new generation of DJs, artists, scholars and activists, are fighting back to reclaim the city, and have asked him to work together with them.

"This project really stimulates me. These young people understand the power of research in supporting their aims. They are campaigning to save the last few alternative venues in the city, and working creatively to build a new and different alternative night-time infrastructure."

His research on the Prague Fringe Festival is concerned with examining the degree to which it can be seen as a model of 'alternative cultural tourism', creating different and more equal social relations, bonds and networks between performers, festival volunteers, audiences and local people.
What is childhood and adolescence like for disabled young people?

That is the question being asked by Dr Janice McLaughlin, Executive Director of Newcastle’s Policy, Ethics and Life Sciences Research Centre (PEALS) in her ongoing research programme.

In the latest project Dr McLaughlin and her team will work with a group of young people with cerebral palsy to explore with them what they think about their life and their bodies.

The research will use several techniques to capture the young people’s perspective, including a virtual social network within which they can swap ideas and training them to use digital equipment to record their experiences.

The young people will produce materials which will be used to challenge assumptions about what their lives are like.

“In this project and others we take a more anthropological approach by doing observations and collecting stories about the everyday social and cultural realities of family life when a younger member is disabled,” she says.

“I’m also interested in how families are about caring relationships. This takes us into ideas of citizenship, kinship, justice, childhood, parenthood and motherhood. This is very important now as we recognise the rights of young people to have a say in how they are cared for and also as we see significant changes to welfare provision in the area of disability.

“The carers of disabled children don’t talk about their child as a burden but rather how they want them to be part of society. This is also what the children and young people want. We want to tap into the creative ideas both disabled children and young people and their parents have about how they can be full members of society. While also continuing to highlight how lack of support from others in society – including welfare services – can limit their potential and make their lives unnecessarily harder,”

Dr McLaughlin’s research interests are also touching on a subject that is likely to grow as an area of social and ethical interest – the question of genetic explanations of childhood illnesses.

She and colleagues are working with families to explore what it means to explain a child’s illness in genetic terms.

“We are at a stage where medical practitioners can point to a genetic explanation of an illness but cannot always go on to say what it means or what the future holds.

“Understanding how families, including children, respond to that uncertainty is something we want to develop in the future.”
Dr Derek Bell  
Senior Lecturer in Politics

Climate change affects all of us, but some more than others. It puts into stark relief the chronic inequities between the rich CO₂-producing nations and the developing world, which suffers disproportionately from climate change, and the legacy left to future generations. How to resolve these injustices and bring global rights and responsibilities into alignment is what exercises Newcastle University political philosopher Dr Derek Bell.

He researches the ethical questions raised by environmental justice. “The question I ask is: given the current injustice, how can we improve the situation and make it more just? What would a fair world look like and what would that require of people?” he says.

“If we think about climate change in terms of universal human rights, such as the right to shelter and to food, we can see that these are being compromised by climate change but in a complex way.”

“There is no obvious agent of climate change. It is the result of the remote, cumulative, collective actions of lots of individuals. How can we protect each person’s human rights from the cumulative effects of other people’s actions?”

This throws the spotlight on to the duties of richer nations – what should we do to prevent these violations of basic rights?

Dr Bell argues that both mitigation and adaptation will be necessary. “We need to invest in new technologies to reduce carbon emissions and we need to pay for adaptation, including better sea and flood defences, in those parts of the world that are most vulnerable.”

“But the really difficult issues are not technological. They are moral and political issues about the fair division of responsibilities. Who should pay and what kind of principles should we use to allocate the costs fairly? What policies are most likely to protect human rights and promote justice in a world where the climate is changing?”

The approach of developed countries is now dominated by market-based solutions, in effect giving richer people the right to pollute the atmosphere at a price. Selling the right to pollute is equivalent to buying shares in the atmosphere. “The sense of ownership this imparts is not going to deliver environmental justice.”

“I think there’s something wrong in viewing the right to pollute the atmosphere as something that can be bought and sold. It distorts our relationship with the planet,” says Dr Bell.

“The question I ask is: given the current injustice, how can we improve the situation and make it more just? What would a fair world look like and what would that require of people?”

e:derek.bell@ncl.ac.uk  
t:+44 (0) 191 222 7465

School of Geography, Politics and Sociology
A small lake in Central Japan is providing a key to unlocking the process of climate change for Professor Takeshi Nakagawa.

The sediment of Lake Suigetsu is an archive of past climate change thanks to the annual settlement of pollen fossils over the past 150,000 years. The composition of the pollen fossil profile correlates with atmospheric conditions – for example, colder conditions result in higher proportions of pollen from boreal trees, warmer conditions are dominated by pollen from broadleaved evergreen trees – year by year, and is of high enough resolution to track changes season by season.

The lake's rare undisturbed sediments provide a finely calibrated record of past climate change.

Professor Nakagawa's work is a very important part of building a more complete picture of what has been happening to the earth's climate over its most recent glacial and inter-glacial periods.

The climate record from Lake Suigetsu, which reveals the changes taking place in a monsoon non-glacial region, can then be compared with similar archives from the ice cores of Greenland and ocean sediments from around the world.

"What we find is the record is telling us that something quite different is happening in regions of the world," says Professor Nakagawa.

"Some changes are similar in amplitude in the North Atlantic and Japan and some changes are entirely missing. It suggests there are different types of climate change and that the process is very complex. Some climate change is regional rather than global and when there are similarities across the globe they do not necessarily happen at the same time.

"We need a more sophisticated model and to accept that some climate change is unpredictable."

"One of our biggest findings is that some climate changes are really abrupt – sometimes a significant change can take place in less than 10 years - and others are not."

Professor Nakagawa is part of an international team of scientists working on the sediment core to reconstruct the earth's climate over the past 150,000 years, placing Newcastle at the centre of one of the most pressing areas of research facing us today.

A further benefit of Professor Nakagawa's research, again the focus of a major international multi-disciplinary project centred on Newcastle, is the use of the very fine calibration and high resolution of the sediments of Lake Suigetsu to compare with radiocarbon dates, providing scientists with a more accurate dating method.

"We need a more sophisticated model and to accept that some climate change is unpredictable."

Professor Takeshi Nakagawa
Professor of Quaternary Sciences

e: takeshi.nakagawa@ncl.ac.uk
t: +44 (0) 191 222 6436
Algae living on the surface of the Pacific Ocean in the Gulf of California are providing vital clues to our understanding of climate change.

The chemistry of their life process and the uniqueness of their environment has created a wonderful natural laboratory for palaeo-oceanographer Dr Erin McClymont. Her work has produced some remarkable findings which have piqued the interest of the scientific community around the world.

"I'm extremely privileged to be one of the few scientists in the UK able to analyse the sediment cores from the Gulf of California thanks to our facilities here in Newcastle," she says.

"The evidence from the tropical Pacific shows that the climate can change extremely abruptly and naturally without man-made influences."

That evidence is found in the sediment at the bottom of the Gulf of California which has been accumulating for millions of years. Drilling down 65 metres and retrieving the sediment – the core – provides Dr McClymont with both a clock and a thermometer.

"There is no oxygen at the bottom of the ocean in the Gulf which means no creatures are present to burrow into the sediment and disturb it.

"One of the chemical fossils we find in the sediments was produced by algae which once lived at the sea surface and whose chemistry changes with temperature. I study this chemistry and can determine the temperature of the ocean surface within 1°C at the time the algae died and began its journey to the ocean floor."

"The sediment core I am studying provides a sea surface temperature record going back 50,000 years, giving a picture of past climate change. It is rare to be able to look at such a fine timescale of decades and centuries in marine cores for this time interval.

"The data is extremely significant. It shows that the tropics warmed as concentrations of carbon dioxide in the atmosphere increased, but before the Greenland ice core (and Europe) warmed."

So what does her work say about theories of man-made climate change?

Dr McClymont is wary of stepping into the controversies, stressing that the sediment record for the tropical Pacific does not extend to the present day.

She sees her work complementing other research being carried out on ice cores from Greenland and Antarctica, providing a perspective that will eventually increase our understanding of the complex drivers of the Earth's climate and why it warms up and cools down over very short periods of time.
Dr Kyle Grayson
Lecturer in International Politics

Paddington Bear and Star Wars would appear to have little in common and certainly would not normally be mentioned in the context of politics.

But for Dr Kyle Grayson the interplay of politics and culture is a dynamic that is too often ignored. To understand one, you need to understand the other.

What actions politicians take, what policies they pursue and why, how we vote for them… the clues can be found in a variety of unusual places from Borat to X-Factor.

"The traditional view that political scientists try to hold on to assumes we are all self-interested, rational actors who know what we want and how to get it," he says.

"The world doesn't work that way. I'm interested in how particular cultural understandings of what's normal affects political outcomes and debates around subjects such as immigration, security, drugs.

"How do some things become framed as being understood as part of British culture and others are deemed to be foreign or suspect?"

Culture creates the symbols, metaphors and shorthand through which we perceive the world.

Dr Grayson believes that UK politicians have not quite woken up yet to the power of culture in determining political outcomes and shaping debate.

"[Former US President] Ronald Reagan was expert as appropriating metaphors at a cultural level in gain support for his policies. His description of the former USSR as 'the evil empire' had a terrific resonance with Star Wars. People understood 'hey, these people are like Darth Vader'."

Even the representation of specific groups of people in TV dramas has a bearing on how we perceive the world and how those perceptions influence our politics. The fact that the bad guy is still a Russian does ultimately come out in the framing of the UK policy and debate.

The US Army understands the subtlety and power of cultural forces, which is why one of its most successful recruitment tools is a highly popular video game.

And what of Paddington Bear? "He's a mirror on the world and frames the kind of debates we have about immigration," says Dr Grayson. "His experiences show the kind of expectations we have as a host society. The Brown family tell him exactly what to do and expect him to behave in certain ways. His experiences did as a great deal about ourselves and how we receive newcomers, whether they are asylum seekers, refugees or migrants."
Playing video games, watching films, roaming the web, reading newspapers and studying TV news channels raises several important questions for Dr Simon Philpott.

How do the medium shape the message and our interpretation of it? What will be the long-term impact on society and individuals as we increasingly engage with these technologies?

By researching ‘newsworthiness’ and ‘news cultures’ in the West, Dr Philpott’s studies explore the interplay between contemporary electronic media platforms and their role in shaping individual and societal beliefs, attitudes and politics.

Dr Philpott believes that where we get our news and entertainment from radically shapes our belief or viewpoint on a particular subject, which is why it’s important to study the proliferation of electronic media and how as a society we interact with it.

“Electronic media has significantly changed what we understand as political literacy throughout society,” explains Dr Philpott.

“The media covers a huge range of issues, but it’s the provision of opinion and highly particular explanations that on the one hand make complex issues easier to understand but on the other hand reduce the room for people to think for themselves. One of the negative effects of media influence on society is the way that relatively unbiased reporting has become less common in recent decades.

“For example, if a news reporter makes repeated and highly negative references on a subject, audiences can be drawn to assuming that these are the ‘natural’ terms of debate. Yet we also know that people are sceptical and that audiences maintain a capacity to interpret news in unexpected ways. So the shaping of opinion and the creation of particular moods is complex.”

Dr Philpott’s work forms a crucial part of furthering the debate surrounding ‘Affective Politics’.

“Despite the profusion in electronic media, as a society we are thinking less and feeling more, says Dr Philpott.

“We locate ourselves in our preferred mediascapes and pay attention to the significance of that medium’s voice or representation of a subject. The Fox News network in the US is a clear example of a news culture that is shrill, biased, and deeply engaged in producing a politics of fear and resentment.

“Studying popular culture and all forms of electronic media from the blogosphere is critically important. Each one is a valuable cultural artifact that enables us to study the proliferating numbers of cultures within any given society.”

“Take the Western world’s portrayal of Asian countries and cultures. These countries are often presented in negative terms, regardless of whether it’s a TV news bulletin, tabloid press, the latest modern warfare video game, action movie or blog. People from many Asian countries would find the Western media representation of them unrecognisable, heavily stereotypical and frequently untrue.”

As part of his research, Dr Philpott has been studying the rise in popularity of video games featuring a “War on Terror” theme since 2001.

“These games are highly sophisticated and designed to immerse the player in a virtual world of warfare against a stereotypically created enemy, with a simple us against them theme. While there is no doubt this form of media is entertaining, it’s important to evaluate whether playing ‘shoot-em-up’ style computer games actually serves to reinforce pre-existing negative attitudes to foreign cultures,” says Dr Philpott.

“For example, does the graphic and realistic nature of this type of entertainment perpetuate fear and hatred towards Muslim communities? Many commentators believe such imagery desensitises game players to violence and encourages violent behaviour but it’s much more complicated than that and we are still trying to come to terms with the effects of games on individuals and gaming communities.

“Yet, in stark contrast to the commercial success of video games, Western ‘war-on-terror’ themed fictional films, particularly those focused on the war in Iraq, have largely failed at the box office as well as receiving stinging criticism from right-wing political commentators and film reviewers. Is this because ‘war on terror’ film directors are themselves bearing witness to the tragedy of war and thereby inviting film audiences to see the effects of war?

“These films are being released into a media environment in which quality news reporting has declined despite the intensity of feeling about ‘otherness’ in society sharpening.”

Dr Philpott concludes, “Is the rise of electronic media changing the nature of independent thought? While electronic media has the potential to heighten political literacy, it’s still questionable whether it has created an environment of richer political and cultural understanding. This is why it’s so important to study each media culture whether that be news, videogames or movies to learn how individuals interact with them, and how, as much as what, they learn from them.”
The trafficking of women from Nepal to work in domestic service or for sexual purposes in many parts of the world is a scandal. There are many organisations (NGOs) helping to rescue and repatriate these women. However, repatriation is only half the story. For many of the women, repatriation can be as traumatic as their trafficked experience. Professor Nina Laurie has been co-leading a team of researchers looking into their plight.

The research stands a good chance of influencing the definition of citizenship in the emerging Nepalese Constitution thereby improving the lot of women who are currently stigmatised and excluded from society because of their experiences.

"People have looked into trafficking and its causes but hardly anyone has done research on what happens to these women after they return to Nepal," says Professor Laurie. "In Nepal, it matters greatly whether these women have citizenship. Many are trafficked before they are old enough to achieve citizenship, which is not bestowed as a right of being born in the country."

"In our interviews with our sample group we heard horrific stories of violence and sexual abuse. These women face stigma and rejection by their families, and they will never achieve citizenship status in Nepal which at the moment only comes through their male relatives. This means they are very limited in the types of livelihood they can pursue, marriage often being the only option."

"Their ability to survive and reintegrate into Nepalese society depends on the extent to which they can hide their identities as trafficked women. They live in fear of being 'outed' and, if married, can face domestic violence from their husband or their husband's family."

Professor Laurie is working with Shakti Samuha, a charity set up by trafficked women themselves, and with research associate Dr Meena Poudel, former head of Oxfam Nepal and Newcastle colleagues Professor Diane Richardson and Janet Townsend, to ensure an authentic picture has been created describing the experiences of repatriated trafficked women.

The research has also engaged a range of organisations including NGOs, donors, the United Nations and the British Government to ensure that the rights of trafficked women are acknowledged and upheld, and that the lives they are able to lead are greatly improved.

"It has been an emotional project," says Professor Laurie. "We now have a much better understanding of the connection between development, citizenship and sexuality, and more importantly our research has given hope of a better life for trafficked women."
How can nation-states best rebuild themselves after a catastrophic episode such as civil war? As conflicts continue to flare around the globe and the resulting instability impacts on all of us, Dr Alex Jeffrey has spent his career focusing on one particular part of the world as a contribution to answering this vital question.

The town of Brcko in what is now Bosnia was devastated in the conflict that broke up the former Yugoslavia, ranged Christian against Moslem, and neighbour against neighbour in the 1990s.

Dr Jeffrey first visited the town in the late 1990s as a student working for a reconciliation charity. That experience changed his life and set him on an academic career that has seen him return many times to his laboratory.

"The late 1990s were a crucial time after the fragmentation of Yugoslavia," he says. "International charities and non-governmental organisations (NGOs) were very prominent in establishing democratic institutions in Bosnia. But the process, promoted by the agendas and priorities of the funders of these organisations, had a pre-occupation with creating top-down structures of government, the judiciary and large formal institutions, and sidelined existing local community associations on the ground.

"The rush towards holding elections within nine months of the peace to demonstrate tangible evidence of progress was a complete disaster. We saw the same in Iraq.

"Those NGOs which received funding were the ones who could speak English, fill in forms, and understood where reporting on their activities should take place. The reconciliation and rebuilding agendas and priorities were set by the donors to the charities and NGOs rather than by the Bosnian people.

"I organised workshops in Bosnia with NGOs and members of local government to talk about these problems and work out how to intervene more effectively on a local scale. It has been an incredible privilege to go to Bosnia and to travel around the world talking about it.

Dr Jeffrey has recently begun a new two-year programme of research looking at the work of the war crimes chamber in Bosnia which has been set up to administer what is known as 'transitional justice' – a necessary step in the process of reconciliation similar to the post-apartheid Truth and Reconciliation Commission in South Africa, and a reaction to the slow progress of the UN’s International Criminal Tribunal for the former Yugoslavia in the Hague.

"The rush towards holding elections within nine months of the peace to demonstrate tangible evidence of progress was a complete disaster. We saw the same in Iraq.”
Some corporate social responsibility sceptics suggest responsible trading is simply a luxurious by-product of a booming economy.

During the last 10 years corporate social responsibility and ethical trade and consumerism have been key elements of corporate strategy, with many major retailers and high street brands putting sustainability and workforce welfare at the heart of their global supply chains.

When the recession kicked in during 2008, Dr Alex Hughes began to carry out an in-depth analysis of key UK retailers’ corporate ethical trading strategies in order to gain a valuable insight into how the corporate responsibility movement has responded in such challenging economic times.

“Opinion at the end of 2008 reflected positions of uncertainty and concern that corporate ethical trading might be reduced in scale because of growing financial pressure. This is why it’s so important to capture the tactical responses and personal experiences of retailers and the way in which these pressures challenged and affected their programmes of work on ethical trade,” explains Dr Hughes.

The research was conducted through interviews with major UK-based companies to gather first-hand accounts of strategic responses to the recessionary pressures linked with their corporate strategies for ethical trade during the economic crisis between late 2008 and early 2010. Dr Hughes is also involved in two other important research projects focusing on ethical trade. One is the emerging ethical trade agenda for British public sector procurement, which comes at a time when the sector faces unprecedented cutbacks.

“Where high street retailers have been targeted by campaigns and media exposés regarding labour standards in their supply chains for many years, the product procurement practices of public institutions have largely escaped the critical spotlight so there is a distinct need to understand and influence the ethical public procurement agenda within this current era of austerity,” says Dr Hughes.

Lastly, she is also involved in a study funded by The Leverhulme Trust in partnership with Durham University to research the pivotal role South Africa has played in the development of ethical trade initiatives designed to enhance livelihoods through engagement and the challenges of balancing economic growth with environmental sustainability in South Africa.

“This research builds on an earlier project and aims to advance knowledge of ethical production and fair trade initiatives originating in both the global North and within South Africa. It will evaluate the ways in which the cultural identities, local politics and ethical values of communities in the Northern and Western Capes shape the strategies and practices of ethical production, and their impacts on livelihood, social and economic development and the environment,” said Dr Hughes.

Ultimately Dr Hughes’ research aims to advance the cultural well-being of indigenous people by understanding how ethical production is rooted in the specific social and environmental concerns of communities throughout South Africa.

Alexandra Hughes

Senior Lecturer in Economic Geography

Dr Alexandra Hughes

School of Geography, Politics and Sociology

e: alex.hughes@newcastle.ac.uk

t: +44 (0) 191 222 5176
The potential for a significant natural disaster was evident because the volcano sits beneath a glacier ice cap and is flanked by populated areas. Based on our work before the eruption, we are in a unique position to study the impacts and dynamics of jökulhlaups to gain important insights into the variety of flood processes taking place during a subglacial eruption.

Post flood surveys are necessary because they provide data for flood models which inform us about the travel time, routing, composition and intensity of future floods during the course of an eruption.

Professor Russell and the research team are working in partnership with the Icelandic Meteorological Office to help the authorities, which are responsible for hazard management and risk mitigation.

“...attempting to prevent the destructive and devastating impact that floods present to communities, infrastructure and the local landscape that makes this research invaluable.

Our findings show that a subglacial eruption can create more than one flood type. In the case of Eyjafjallajökull, the results are being used to inform hazard management plans, assist emergency response provision and flood prevention schemes to help communities prepare and cope with extreme floods,” says Professor Russell.

Meanwhile, the research team’s ongoing study of the Icelandic landscape looks at issues including how flood water interacts with large ice block obstacles and affects man-made structures.

“The Iceland research provides direct parallels with the interaction of flood flow with trees, buildings and other man-made objects within UK rivers systems. Ultimately, our work will help to shape where and how things are built in the future, both at home and overseas,” explains Professor Russell.