**Overview**

Welcome to the latest in our series of quarterly newsletters for the Sajag-Nepal project. The purpose of these newsletters is to summarise the breadth and depth of research across the project, highlight outcomes and outputs that we want to share more widely, and draw attention to upcoming activities or milestones.

It has been a very busy few months since our last quarterly update. With the encouragement of Takeshi and Amod at ADRRN, several members of the project team travelled to Bangkok in December to take part in the Regional Humanitarian Partnership Week meeting. The Sajag-Nepal session outlined the partnership model that we’ve developed in the project from different perspectives – academic, UN, and practitioner – and ended with a call from Amod for this model to be replicated in other countries within the ADRRN network. It was clear that the mix of action and academic research combined with sustained engagement and exchange with a wide range of partners is fairly unique. The visit also provided an opportunity to meet with staff in the UN-OCHA Regional Office for Asia Pacific to keep them informed about the work that we are doing, including the multi-hazard risk model and support for contingency planning.

In January we welcomed two new members to the project team. Erin Harvey has taken over from Mark as a PDRA based at Durham, working with colleagues from NSET in developing and analysing the multi-hazard inventory. Erin has recently finished her PhD at Cardiff, focusing on understanding ongoing debris flow hazard after the 2008 Wenchuan earthquake in China. Katherine Arrell also joins the project as a PDRA based at Northumbria, working on mobility and exposure and trying to make a bridge between large-scale population data sets and lived experiences of people in Nepal, especially in the case-study palikas. Katherine previously worked as a researcher on the evolution of landslide risk to buildings after the Gorkha earthquake, so she’s very familiar with the scope and focus of the project. Both Erin and Katherine have hit the ground running and it’s great to have them involved.

In March, Nick presented the Sajag-Nepal project to His Excellency Ralph Goodale, the Canadian High Commissioner to the United Kingdom. The High Commissioner was visiting Durham to explore and enable links with Canada, and links between Canadian and UK researchers, and so was interested to hear about our collaboration with Sara at UBC. In a former role His Excellency was the minister for Public Safety in Canada, and so was well versed in scenarios, contingency planning, and the wider understanding of hazards and risks. He was also keen to hear of the developing work at UBC being co-led by Sara on the Disaster Resilience Research Network (<https://drrn.ubc.ca/>), and how the work with indigenous communities in Sajag-Nepal might feed into similar work in Canada in the future.

Staff from across the project came together in April to meet with the Humanitarian Country Team (HCT) around support for their earthquake contingency plans, and with NDRRMA around support for monsoon planning in 2023 and 2024. Prem has been working hard on joining the dots between the HCT and NDRRMA in their planning processes, and also helping to shape ongoing discussions about the development of contingency plans at the provincial as well as the federal levels of government. While it is still too early to tell what will come of these discussions, it seems like some consensus is beginning to emerge about the ways in which these plans can complement each other and the various responsibilities held at each level. As a project, we are well-positioned to respond to research needs that come up as this framework takes shape.

The 2023 monsoon is just a few months away and we are in position to learn a lot more about the occurrence of landsliding and the antecedent conditions that lead to slope movement, especially in our case-study palikas. The ten slope stability monitoring stations have been active since September, thanks to the hard work in particular of the RAs at the Social Science Baha as well as team members at NSET and Tribhuvan. Nick and Max have been looking at the acoustic emissions data collected so far in response to sporadic rainfall over the winter. There are some big differences in the acoustic data between the sites, which may be due in part to the very local conditions and coupling between the sensors and the ground. Max has shown that the changes in soil moisture that we observe at some – but not all – sites can be modelled pretty well with a large-scale hydrological model, which means that we could potentially scale that model up to anticipate soil moisture over larger areas. We will learn a lot over the coming months about how rainfall leads to increases in soil moisture at the sites, whether or not that is linked to acoustic emissions and slope movement, and how that fits with what residents observe in their communities as the monsoon develops.

Finally, as I write this we are getting ready to welcome Jeevan, Mukta, Anuradha, Tek, Dipak, and Nyima to the UK as they travel for the Britain-Nepal Academic Council meeting. Amy and Katie have put together a full schedule of writing workshops and discussion sessions, with time set aside both for specific outputs from WP1 as well as broader conversations with the wider project team. There’s also some time to get out of the conference room and see a bit of northeast England. Many thanks in particular to Rachel for all of her efforts to organise the visit and make sure that it runs smoothly.

Alex Densmore

**SPOTLIGHT ON RESEARCH**

As part of our ‘spotlight on research’ section, Maximillian Van Wyk de Vries from Oxford University took part in our quiz, please read on to find out more!

**Q1. Tell us a little bit about you and your background**

I am a geologist by background and have worked across a range of different subdisciplines. In particular, I have worked on reconstructing past climatic changes, monitoring glacier change, and understanding a range of natural hazards. More recently a lot of my work has been done on my computer through analysis of satellite imagery and large-scale numerical modelling.

**Q2. What drew you into your research area?**

I began working on natural hazards as these were an aspect of the Earth Sciences with more real-world relevance than many. One of my first experiences working on landslide hazard came after the 2021 Chamoli rock-ice avalanche, when I worked with a large international team to better understand the cause and impacts of this disaster. In that case we were able to show that the hillslope was moving several years prior to its collapse, raising important questions about the potential and limitations of satellite-based monitoring over larger areas.

**Q3. What part of the project are you looking forward to the most?**

I am particularly looking forwards to in-person meetings with various project colleagues in Kathmandu. I really appreciate the fact that the Sajag Nepal team is both spread across a range of different disciplines and has a large contingent of local colleagues based in Nepal. I am particularly anticipating sharing and learning technical expertise with Nepali colleagues, and better understanding how our research fits in with existing local systems.

**Q4. What do you hope to have achieved by the end of the project?**

I hope to achieve three main things by the end of this project:

1 - Create the first national-scale map of slow-moving landslides in Nepal, and explore the interactions of these with local infrastructure and other hazards

2 - Determine whether better representation of soil-moisture is an effective means to improve landslide forecasts and take steps towards integrating this into an operationalized forecast.

3 - Build long-term connections with both Nepali and British colleagues who I can continue to collaborate with in future projects

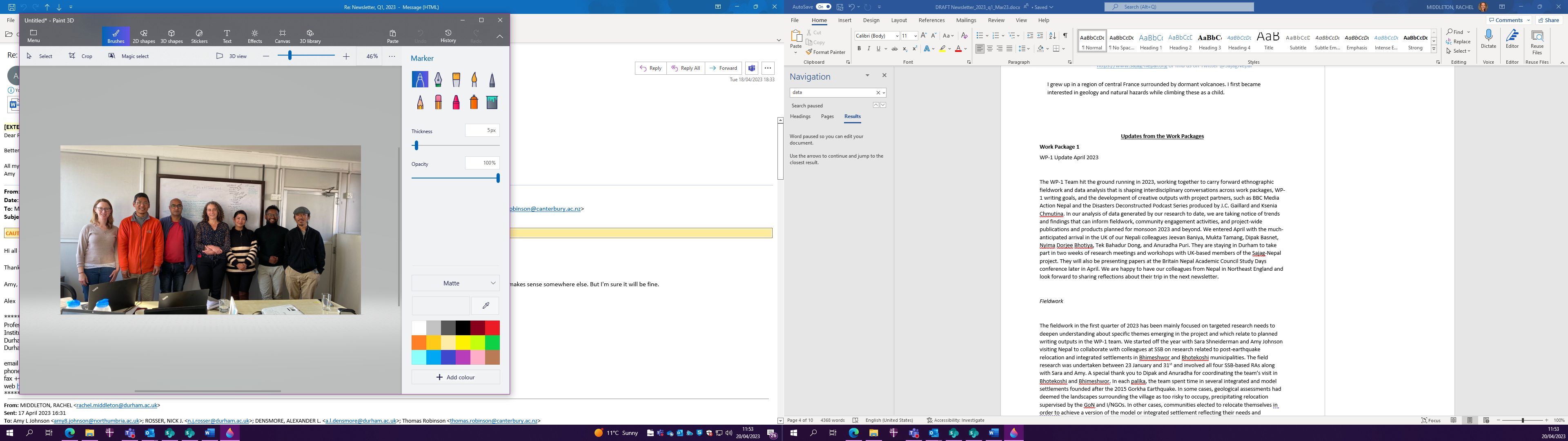
**Q5. Tell us an interesting/surprising fact about yourself**

I grew up in a region of central France surrounded by dormant volcanoes. I first became interested in geology and natural hazards while climbing these as a child.

**Updates from the Work Packages**

**Work Package 1**

The WP-1 Team hit the ground running in 2023, working together to carry forward ethnographic fieldwork and data analysis that is shaping interdisciplinary conversations across work packages, WP-1 writing goals, and the development of creative outputs with project partners, such as BBC Media Action Nepal and the Disasters Deconstructed Podcast Series produced by J.C. Gaillard and Ksenia Chmutina. In our analysis of data generated by our research to date, we are taking notice of trends and findings that can inform fieldwork, community engagement activities, and project-wide publications and products planned for monsoon 2023 and beyond. We entered April with the much-anticipated arrival in the UK of our Nepali colleagues Jeevan Baniya, Mukta Tamang, Dipak Basnet, Nyima Dorjee Bhotiya, Tek Bahadur Dong, and Anuradha Puri. They are staying in Durham to take part in two weeks of research meetings and workshops with UK-based members of the Sajag-Nepal project. They will also be presenting papers at the Britain Nepal Academic Council Study Days conference later in April. We are happy to have our colleagues from Nepal in Northeast England and look forward to sharing reflections about their trip in the next newsletter.

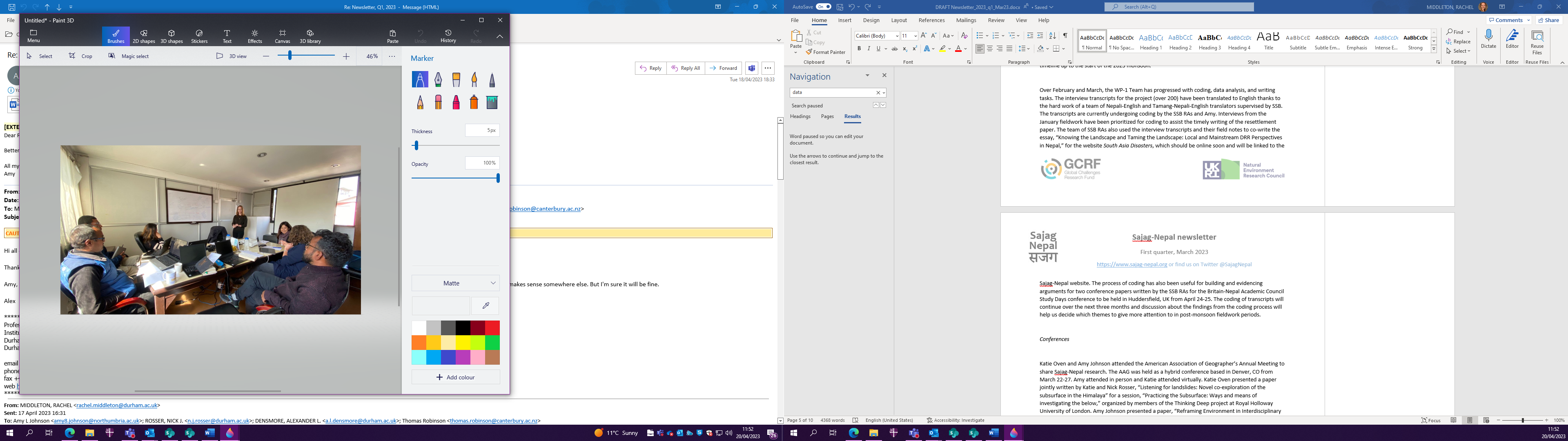


*Fieldwork*

The fieldwork in the first quarter of 2023 has been mainly focused on targeted research needs to deepen understanding about specific themes emerging in the project and which relate to planned writing outputs in the WP-1 team. We started off the year with Sara Shneiderman and Amy Johnson visiting Nepal to collaborate with colleagues at SSB on research related to post-earthquake relocation and integrated settlements in Bhimeshwor and Bhotekoshi municipalities. The field research was undertaken between 23 January and 31st and involved all four SSB-based RAs along with Sara and Amy. A special thank you to Dipak and Anuradha for coordinating the team’s visit in Bhotekoshi and Bhimeshwor. In each palika, the team spent time in several integrated and model settlements founded after the 2015 Gorkha Earthquake. In some cases, geological assessments had deemed the landscapes surrounding the village as too risky to occupy, precipitating relocation supervised by the GoN and I/NGOs. In other cases, communities elected to relocate themselves in order to achieve a version of the model or integrated settlement reflecting their needs and aspirations for community post-disaster. From spending time in these sites, our team came to better understand evolving perceptions of risk, hazard, and community in the context of post-disaster governance. For example, in communities that had been relocated because of category three geological assessments, we found that people maintained ongoing connection to their origin villages, moving seasonally and in some cases daily between relocation settlements and origin villages for different reasons related to agricultural livelihoods, comfort of homes, and attachment to community and place. Based on these findings, members of WP-1 are co-writing a paper led by Sara Shneiderman which analyzes patterns and practices of circular mobility in post-disaster resettlement villages for an invited paper contribution to a special issue proposal “After Displacement” for the journal *World Development* being co-edited by Vikramaditya Thakur, Joel Cabalion, Asmita Kabra, and Arnab Roy. Upon returning to Vancouver, Sara Shneiderman was interviewed by the communications director of the School of Public Policy & Global Affairs about her research with Sajag-Nepal. You can read her full interview here: <https://sppga.ubc.ca/news/life-resettled-the-sajag-nepal-project-with-sara-shneiderman/>.

*Data Analysis and Writing*

In the first week of February, Sara, Amy, Jeevan, and Mukta co-led a workshop with the SSB RA team and Sweata Sijapati about data analysis and writing. The workshop focused on how to build analysis and ethnographic arguments from research materials, inspiring a provocative conversation about what data means, what kinds of data we have generated so far in the Sajag-Nepal project, and how we integrate different kinds of data in our analysis. On day one, we worked from interview transcripts to identify a coding process that capture themes and findings emergent from interviews in a systematic and searchable method. Day two focused on ethnographic writing and voice. The RAs and others in the workshop experimented with ethnographic writing and read examples of ethnography written by different members of the team. SSB co-director, Deepak Thapa, joined us for this special discussion. Day three pulled together our discussion of analysis and writing as we began outlining the paper on resettlement mentioned above, which related directly to the January fieldwork. Day four concluded the workshop with a detailed discussion of writing plans and activity timeline up to the start of the 2023 monsoon.



Over February and March, the WP-1 Team has progressed with coding, data analysis, and writing tasks. The interview transcripts for the project (over 200) have been translated to English thanks to the hard work of a team of Nepali-English and Tamang-Nepali-English translators supervised by SSB. The transcripts are currently undergoing coding by the SSB RAs and Amy. Interviews from the January fieldwork have been prioritized for coding to assist the timely writing of the resettlement paper. The team of SSB RAs also used the interview transcripts and their field notes to co-write the essay, “Knowing the Landscape and Taming the Landscape: Local and Mainstream DRR Perspectives in Nepal,” for the website *South Asia Disasters*, which should be online soon and will be linked to the Sajag-Nepal website. The process of coding has also been useful for building and evidencing arguments for two conference papers written by the SSB RAs for the Britain-Nepal Academic Council Study Days conference to be held in Huddersfield, UK from April 24-25. The coding of transcripts will continue over the next three months and discussion about the findings from the coding process will help us decide which themes to give more attention to in post-monsoon fieldwork periods.

*Conferences*

Katie Oven and Amy Johnson attended the American Association of Geographer’s Annual Meeting to share Sajag-Nepal research. The AAG was held as a hybrid conference based in Denver, CO from March 22-27. Amy attended in person and Katie attended virtually. Katie Oven presented a paper jointly written by Katie and Nick Rosser, “Listening for landslides: Novel co-exploration of the subsurface in the Himalaya” for a session, “Practicing the Subsurface: Ways and means of investigating the below,” organized by members of the Thinking Deep project at Royal Holloway University of London. Amy Johnson presented a paper, “Reframing Environment in Interdisciplinary Disaster Research: A Decolonial Approach to Studying Hazard and Risk in Nepal,” for the session, “Hazards or vulnerability? Shifting boundaries between physical and cultural geography through Disaster Research.” Amy also attended the Nepal and Himalayan Geographers Group meeting while in Denver and made new connections with geographers working in Nepal and the Himalaya.

Jeevan Baniya, Mukta Tamang, Dipak Basnet, Nyima Dorjee Bhotiya, Tek Bahadur Dong, and Anuradha Puri traveled to Durham on April 16th. They will be attending the Britain Nepal Academic Council Study Days from April 24-25 and presenting research from Sajag as part of a Sajag-Nepal Project panel co-organized with Katie Oven and Amy Johnson. We will provide a full update on the SSB team’s trip to Nepal in the next newsletter, so stay tuned!

*Knowledge Sharing Meetings*

In March, the SSB RAs and Jeevan Baniya held a sharing session with MA students and researchers from Copenhagen Centre for Disaster Research, University of Copenhagen. The meeting was organized upon the request from Emmanuel Raju, Director- Copenhagen Centre for Disaster Research Associate Professor, Global Health Section. Jeevan and the SSB RAs shared our experience about the situation of DRRM in general, drawing from ongoing fieldwork for Sajag-Nepal. Prof. Raju brought the students to Nepal as a part of the course at his centre: Vulnerability and Risk Assessments Methods course 2023. This course is in collaboration with Dhulikhel Hospital/Kathmandu University.

The SSB RAs and Amy have been regularly meeting with BBC Media Action Nepal to support BBC Media Action Nepal activities related to local radio monsoon contingency planning, national radio content around monsoon preparedness, and film production. Amy Johnson met with Kiran Bhandari and Seana Lama from BBC Media Action and members of the Association of Community Radio Broadcasters in early February to share findings on local monsoon knowledge and preparedness and learn about ACORAB’s needs for contingency planning. Nyima Dorjee Bhotiya met with Kiran Bhandari and representatives from seven radio and tv stations in early April to share a presentation “Perspective of the field: what can be communicated for disaster risk reduction.” Nyima has also been facilitating conversations between BBC Media Action Nepal and the SSB RA team about the production of two films featuring individual stories of monsoon preparedness and experience from two of the case study palikas. These films are in development and we look forward to sharing more updates about them in the near future.

*Spotlight: Katherine Arrell’s research on exposure and mobility*

Katherine Arrell joined the Sajag-Nepal project in January and is based at Northumbria University with Katie Oven and Amy Johnson.  Katherine’s work is primarily focusing on exposure and mobility and exploring different ways we can try to represent these ideas within the project.  Katherine has been working with Alex Dunant on empirically deriving this information from some of the Data for Good data we have access to, allowing us to look at a national scale where people might be and where they move to.  They are finding some exciting trends and this will be one strand of collaborative work they both explore moving forward. Katherine has also been tying up the final loose ends of a journal paper with Mark Kincey, Nick Rosser and other members of the Sajag-Nepal team about landscape patterns of risk from our modelled runout data. She is also working on a paper with Amy, Nick, Jonathan Rigg and Alex Dunant about spatial and temporal scale patterns in both landslide hazard, exposure, and therefore, risk.

Katherine is scheduled to travel to Nepal in early May to carry out research on local perspectives of exposure and mobility. She has been working with Amy, Dipak Basnet and Anuradha Puri to develop a series of participatory mapping techniques for use with local communities in Bhotekoshi, with an eye to expanding this research to other case study palikas in the future.  Katherine has been in conversation with JC Gaillard as well to think carefully about what these sessions may look like and how the sessions can be organized in ways that enable participants to map and discuss information that is important and meaningful to them.  Katherine, Dipak and Anuradha are hoping their joint fieldwork will help capture how people move within the landscape through time and space, allowing us to improve our current building-based exposure dataset.  In addition to this they are also hoping to further explore some of the interesting ideas of how local knowledge can be used to sense hazards.

Work Packages 2 and 3

A major achievement over the last few months has been the development of the preliminary multi-hazard risk model, led by Alex Dunant but involving a number of other team members. This uses a nationwide database of buildings to estimate the impacts from one or more linked hazards in the overall hazard chain. Alex Du has initially tested the model against the 2015 Gorkha earthquake, to ensure that it can reproduce the overall pattern and approximate level of impacts. While the model is run on individual buildings, the results improve – that is, they better match the observed impacts from the Gorkha earthquake – the more they are aggregated by administrative unit. He has found that the model yields adequate results when aggregated by ward, and reasonable results when aggregated by palika. This is helpful to know, because it allows us to be clear about the scales over which the model can provide useful information for planning purposes, and the scales over which it cannot.

Members of the Sajag-Nepal team met again with the clusters that form the Humanitarian Country Team (HCT) in early April, as part of ongoing engagement to support the clusters in their contingency planning. Building on the previous meetings, the focus this time was around the earthquake Emergency Response Preparedness Plan, which was last updated in February 2022. Team members met with each of the clusters in turn and presented the first results of the multi-hazard risk model, comparing the expected pattern of impacts from earthquake shaking alone with those that consider shaking, landsliding, and runout. The model used the same ensemble of 30 earthquakes that underpins the current earthquake contingency plan, but allows us to include impacts from other earthquake-related hazards as well. The results were presented at ward level, allowing cluster members to see which areas are considered to be at greater risk of impact from the full hazard chain. The clusters were enthusiastic about the resulting maps and provided a number of suggestions for how the outputs could be improved and tweaked to their specific planning needs. A really useful outcome from the meetings was the recognition that this could form the basis of cluster-specific risk maps, using different measures of vulnerability that are chosen by each cluster. Alex Du will take this work forward with Ragindra (UN RCO) and other members of the project team.

Sajag-Nepal team members also met with Anil Pokhrel and staff at the NDRRMA to share the preliminary results of the multi-hazard risk model and offer support for monsoon planning. A more unified approach to monsoon and earthquake planning between the NDRRMA and the HCT remains on the table, although for the moment there are some practical issues that still need to be overcome. Sweata will now be based part-time in NDRRMA in order to better link the project to their ongoing activities, and Anil promised to share their information needs and questions around monsoon preparedness with the project team as they arise.

**Work Package 4**

Alex, Ganesh Jimee, and Jeevan, along with Bhesh and Herve from IFRC, met with the Joint Secretary and Undersecretary of MoFAGA in order to introduce the project to them and seek their support in working with the Community-Based Disaster Risk Management Platform. Jimee and Jeevan answered a number of questions about the overall aims and goals of the project. The next step is to present the project to MoFAGA in more detail, and to hold an initial orientation meeting with the Platform members before the 2023 monsoon, both to let them know about the project and to hear from them about their information needs and perceptions of the outstanding gaps around monsoon and earthquake preparedness. It is early days still, but this is a promising development and potentially a great way of reaching a wide range of different organisations.

Team members from across the project are starting to come together around the issue of scale. It’s been evident for some time now that there are inherent length scales in many of the types of work that we do on the project, and it’s becoming increasingly clear that adequate risk planning needs to take those scales into account. For example, a person’s exposure to hazards is governed not just by the spatial ‘footprint’ of those hazards, or the location of their house, but also by the distances and pathways over which they travel, on a daily, seasonal, or annual basis. Without understanding these movement patterns, we can’t hope to really grapple with what hazards people actually face. Similarly, the data sets that we use to understand the hazards themselves have their own built-in length scales – we don’t know, for example, how rainfall varies in detail from one location to another, or how the likelihood of landsliding varies over very short distances. Some of the time during the SSB visit to the UK will be used to think about how these length scales intersect with each other, and how we might use that knowledge to improve our ability to plan and prepare.

**Research ethics**

The Sajag-Nepal project has undergone ethical review at Durham University and we have received approval to begin the research. A copy of the documentation (including a project risk assessment) is available via [OneDrive](https://durhamuniversity-my.sharepoint.com/:f:/r/personal/vqnv83_durham_ac_uk/Documents/Sajag-Nepal%20Project/Ethics/Ethics%20%E2%80%93%20Approved%20October%202021?csf=1&web=1&e=0CDhvh) for the team to access. As previously discussed, this is very much a live document and work package leads will be responsible for updating and resubmitting amendments as required, and as the research evolves. A big thank you to everyone who fed into this process. Any questions, please contact Katie: [katie.oven@northumbria.ac.uk](mailto:katie.oven@northumbria.ac.uk)

**Social media**

Sajag-Nepal is active on Twitter (@SajagNepal) and our project website ([www.sajag-nepal.org](http://www.sajag-nepal.org)) is fully open for blog posts and reports. If you would like to tweet or post to the website, please contact Rachel for login details. We also feature on the recently relaunched Radix website ([Radix: Radical Interpretations of Disasters](https://www.radixonline.org/news-and-events)), as an example of a project with its own ethical guidelines which build on the principles of the [Disaster Studies Manifesto: Power, Prestige and Forgotten Values](https://www.radixonline.org/manifesto-accord).

Alex Dunant has started a project Slack platform and several team members are active on Slack – if you are interested in exploring this as a way to communicate across the project, please contact Alex directly ([alexandre.dunant@dur.ac.uk](mailto:alexandre.dunant@dur.ac.uk)).

We are trialling a move from Google Drive to OneDrive for general project materials and information. We have started this with materials for our monthly team meetings, and if there are no access issues then we will extend this to other documents as well. Please contact Rachel if you have any questions or concerns.

Project communication guidelines have been developed with input from the WP leads, with guidance for good practice and things to consider when communicating about the project. This is available on the project OneDrive and Google Drive. We will continue to update and refine this, so please send any suggestions to Rachel.

**Recent publications**

If you have recently published a paper or other output that is relevant to Sajag-Nepal, please send the details to Rachel and we will list them here for the team to see. Please include the DOI and a link to any open-access version, if possible.

Kincey, M.E., Rosser, N.J., Densmore, A.L., Robinson, T.R., Shrestha, R., Pujara, D.S., Horton, P., Swirad, Z.M., Oven, K.J., and Arrell, K. (2022) Modelling post-earthquake cascading hazards: changing patterns of landslide runout following the 2015 Gorkha earthquake, Nepal. Earth Surface Processes and Landforms, 48, 537-554, doi:10.1002/esp.5501.

Shneiderman, S. Life Resettled: The Sajag-Nepal Project with Sara Shneiderman, E-newsletter of the UBC School of Public Policy & Global Affairs, 2023. Life Resettled: The Sajag-Nepal Project with Sara Shneiderman, <https://sppga.ubc.ca/news/life-resettled-the-sajag-nepal-project-with-sara-shneiderman/>