

Progressing towards safe, inclusive and equitable field research

Sam Wimpenny^{1*}, Scott Watson², Helena Brown³, Martin Zebracki⁴

¹ COMET, School of Earth Sciences, University of Bristol, UK

² COMET, School of Earth and Environment, University of Leeds, UK

³ School of Earth and Environment, University of Leeds, UK

⁴ School of Geography, University of Leeds, UK

* Corresponding author: s.wimpenny@bristol.ac.uk

The field remains an unsafe and isolating workplace for many. We present resources to empower and guide researchers towards safer, more inclusive, and more equitable fieldwork practice.

Fieldwork can be a formative experience, but for too many – particularly those from gender, sexual and ethnic minority backgrounds and people living with disabilities – it can be traumatising and dangerous^[1,2,3]. Problematic fieldwork practice harms progress in geoscience by creating barriers to diversification, limiting creativity, and negatively impacting the communities that scientists aim to serve^[2,4,5].

Negative fieldwork experiences are prevalent across all levels of field activity, with recent discussion focused particularly on undergraduate fieldtrips^[e.g. 4]. Here we focus on the unique challenges faced by fieldworkers in geography, earth and environmental sciences when conducting research fieldwork. Researchers often conduct fieldwork in small groups, with implicit power structures, and in remote places (Figure 1). They also operate across institutions and jurisdictions. Consequently, research fieldworkers rarely follow a collective code of practice, which leads to little accountability for problematic behaviour.

Learning from the community

In light of these challenges, since 2020 we have been engaging researchers based at UK universities in conversations about fieldwork practice and behaviour. In addition, we have collated fieldworker experiences and existing guidance from blogs, research papers^[6,7,8], and institutional codes of conduct^[9,10]. From these efforts, three key areas of concern have emerged: safety in the field, inclusive fieldwork practice, and equitable outcomes from fieldwork.

A safe environment is one in which there is limited physical or emotional threat to the wellbeing of all who are participating in the fieldwork. An inclusive environment is one in which everyone

feels their concerns, opinions and contributions regarding the fieldwork are valued. An equitable environment is one in which everyone feels there is equal access to opportunity to participate in the fieldwork activities and stand to benefit from its outcomes equally.

Creating safe, inclusive and equitable spaces for fieldworkers is an important step to enhancing research culture. However, we received feedback that existing risk assessments vary in detail between institutions and focus mostly on risks to physical safety^[11], and some researchers regard them as a tick-box exercise, rather than something to be engaged with constructively. We have identified a demand for resources that span institutions and provide succinct guidance to researchers, and those supporting research activities, about fieldwork practice.

Guidance for research fieldwork

The principles of safety, inclusivity and equity should be embedded in fieldwork planning from the outset. Fieldtrip leaders should take responsibility for the research culture, given the outsized benefits it might have for their team members, especially junior colleagues^[8]. To do so, leaders should create opportunities to engage in open conversations about one another's concerns and experiences during the planning stage. These conversations will be most productive if all fieldworkers are kept informed about the logistics and aims of the trip, such that individuals can make informed decisions regarding their own safety. We encourage participants to be open to criticism of what they deem standard practice^[12], and to listen when plans are challenged.

Discussing topics of identity with colleagues and challenging fieldwork practice can be uncomfortable. To provide inclusive spaces for discussion, research fieldwork co-ordinators can manage uncomfortable power structure dynamics through mediation with an independent colleague. Leaders can offer to assign allies to fieldworkers who have identified themselves as at-risk during open conversations; the ally could be a fieldworker or an informed colleague from their institution who can provide support and advocacy. Fieldtrip leaders should also encourage the team to educate themselves about the culture and history of the region they are visiting to better understand the potential risks to their colleagues, attend active bystander training to be better equipped to help mitigate risks if they emerge, and provide a confidential framework through which colleagues can raise concerns anonymously, whilst encouraging collaborative problem solving.

It is important to mitigate risks to safety and build inclusivity prior to travel such that there is ample time for adjusting plans. However sometimes unsafe situations can emerge whilst in the field. In such scenarios, first ensure the immediate safety of all fieldworkers; second, document the incident focusing on facts; third, report the incident to the relevant individuals or authorities; and, fourth, ensure accountability if escalation is necessary. Be aware that some state authorities can pose a significant risk to individuals from minority backgrounds^[e.g. 13].

To establish what fieldwork equity might look like ask colleagues, collaborators and stakeholders what they would like to gain from the work^[8,10]. This might include co-authorship, access to data, professional experiences, skill development, or financial remuneration. Involve the whole team in designing the work and create a means through which colleagues can offer their expertise and knowledge to contribute to the research aims and map their skills onto planned field activities. Remember that fieldwork is a valuable learning experience: provide space for others to develop understanding and skills on their own terms.

Resources to support fieldworkers

We have developed a set of freely available resources to guide researchers in designing safe, inclusive and equitable fieldwork^[14]. These consist of five short informational videos hosted on YouTube, as well as three textual resources including a Code of Conduct (adapted from [15]), longer-form written guidelines, and a set of self-reflective questions that can serve as an Ethics and Inclusivity Assessment.

The informational videos provide context for why research fieldwork has traditionally been an isolating and unsafe space and summarize guidance from a range of resources on safety, inclusivity, and equity in the field into a single, easy-to-digest format. The videos can be used as a supplement to existing fieldwork risk assessments, or as part of student and staff inductions, to motivate researchers to think beyond considerations of just physical safety during fieldwork planning.

The Code of Conduct is intended to lay out the ground rules for fieldwork participation. The Ethics and Inclusivity Assessment poses questions to fieldworkers often overlooked in traditional risk assessments^[12]. Although the Code of Conduct and the Ethics and Inclusivity Assessment can be used by individuals, we hope they will be used by groups during fieldwork planning.

The resources and guidance have been developed for an audience of researchers at high-income, Western institutions, and are presented in English. However, the content is intended to be widely applicable, as well as updated and challenged through a dedicated online forum^[14].

Remaining challenges

We hope the guidance we have assembled will help researchers to cultivate a safe, inclusive and equitable field research culture, but challenges remain. A common concern is how individuals can maintain personal privacy, whilst also ensuring that needs are met in fieldtrip planning, particularly when operating in small field teams where anonymity may be difficult. It can also be difficult to manage different expectations among colleagues across research institutions or cultures. The role of higher education institutions, professional bodies and grant-awarding bodies in setting and assessing these standards also needs to be considered and critiqued. There remains much work to do to make equitable and inclusive research practice the standard, not the exception.

Many of the challenges researchers face are deeply contextual and intersectional. The general guidance provided here is best used as a framework to initiate discussions within research groups or departments, but not necessarily to offer definitive solutions. We therefore encourage researchers to reflect on the resources, share them, adapt them, and provide feedback on how they have been used or adapted^[14]. Through this collective action, we can progress to building safer, more inclusive and more equitable research fieldwork environments.

Acknowledgements

This research received ethical approval from the Business, Environment and Social Sciences Faculty Research Ethics Committee at the University of Leeds. The project was funded by Research England's Enhancing Research Culture Fund from the University of Leeds. SaW was supported by the Royal Society under URF\R1\180088 and RF\ERE\210041. SaW and ScW were supported through COMET, which is the NERC Centre for the Observation and Modelling of Earthquakes, Volcanoes and Tectonics, a partnership between UK Universities and the British Geological Survey.

Competing Interests

The authors declare no competing interests.

References

1. Marin-Spiotta, E. et al. Hostile climates are barriers to diversifying the geosciences. *Advances in Geosciences* 53, 117–127. issn: 16807359 (July 2020).
2. Zebracki, M. & Greatrick, A. Inclusive LGBTQ+ fieldwork: Advancing spaces of belonging and safety. *Area* 54, 551–557. issn: 14754762 (Dec. 2022).
3. Clancy, K. B., Nelson, R. G., Rutherford, J. N. & Hinde, K. Survey of Academic Field Experiences (SAFE): Trainees report harassment and assault. *PLoS ONE* 9. issn: 19326203 (July 2014).
4. Giles, S., Jackson, C. & Stephen, N. Barriers to fieldwork in undergraduate geoscience degrees. *Nature Reviews Earth and Environment* 1, 77–78. issn: 2662138X (Feb. 2020).
5. Dowey, N. et al. A UK perspective on tackling the geoscience racial diversity crisis in the Global North. *Nature Geoscience* 14, 256–259. issn: 17520908 (May 2021).
6. John, C. M. & Khan, S. B. Mental health in the field. *Nature Geoscience* 11, 618–620. issn: 1752-0894 (Sept. 2018).
7. Anadu, J., Ali, H. & Jackson, C. Ten steps to protect BIPOC scholars in the field. *Eos* (2020).
8. Ramírez-Casta, V. et al. A set of principles and practical suggestions for equitable fieldwork in biology. *Proceedings of the National Academy of Sciences* 119 (2022).
9. Picot L. E. & Grasham C. F. Code of Conduct for Ethical Fieldwork 2022. <https://researchsupport.admin.ox.ac.uk/files/ethicalfieldworkcodeofconductpdf-1>.
10. <https://serc.carleton.edu/advancegeo/index.html>
11. Prior-Jones, M. et al. An inclusive risk assessment tool for travel and fieldwork. EGU2020. <https://meetingorganizer.copernicus.org/EGU2020/EGU2020-7678.html> (Mar. 2020).

12. Demery, A. J. C. & Pipkin, M. A. Safe fieldwork strategies for at-risk individuals, their supervisors and institutions. *Nature Ecology and Evolution* 5, 5–9. issn: 2397334X (Jan. 2021).
13. Atchison, C. J. Challenges of fieldwork for LGBTQ+ scientists. *Nature Human Behaviour* 5, 1462. issn: 23973374 (Nov. 2021).
14. <https://comet.nerc.ac.uk/fieldwork-guidelines/>
15. McKinnon, J. Fieldwork Expectations Agreement. (East Carolina University, July 2018).

Figures

Figure 1: Research fieldwork brings with it unique challenges. These include working in small groups in isolated spaces and with colleagues that have different cultural and professional standards (photo by Alex Copley).