

# Enabling equitable and ethical research partnerships in crisis situations: Lessons learned from post-disaster heritage protection interventions following Nepal's 2015 earthquake

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## Abstract

The earthquakes which struck Nepal's capital in 2015 were humanitarian disasters. Not only did they inflict tragic loss of life and livelihoods, they also destroyed parts of the Kathmandu Valley's unique UNESCO World Heritage site. These monuments were not just ornate structures but living monuments playing central roles in the daily lives of thousands, representing portals where the heavens touch earth and people commune with guiding deities. Their rehabilitation was also of economic importance as they represent a major source of tourist income and employment. Unfortunately, the social and political desire for rapid reconstruction resulted in the swift removal of many traditionally constructed foundations and their replacement with modern materials without assessments of whether they contributed towards the collapse of individual monuments. These actions, combined with the wholesale removal, mixing and dumping of modern and historic debris, contributed to a second, equally destructive, cultural catastrophe – irreversible damage to Kathmandu's Medieval fabric, in a process which frequently excluded local communities and custodians. This case study draws from our collective reflections and lessons learned from our attempts to enable equitable and ethical research partnerships between UK and Nepali colleagues as well as local communities in the debris of the Kasthamandap, Kathmandu's eponymous monument. After briefly describing the potential of mobilising archaeologists in post-disaster contexts and outlining the challenges of undertaking research in such a setting, our case study utilises the TRUST Code to assess the character and success of our multidisciplinary collaboration in a time of crises.

## Keywords

TRUST code, post-disaster crisis, heritage protection, 2015 Gorkha earthquake, equitable and ethical research partnerships, Kathmandu, Nepal, community engagement

## Introduction

The UN's On-Site Operations Coordination Centre (OSOCC) estimated that the earthquakes in Nepal on 25th April and 12th May 2015, along with their aftershocks, killed 8790 people and injured more than 17,866 (OSOCC Assessment Cell, 2015). In addition, 15,001 governmental buildings and 288,797 residential buildings were destroyed following the initial earthquake (OSOCC Assessment Cell, 2015) and, in the 14 most-affected districts, approximately 1,814,000 people lost shelter. Assistance to remote areas was challenging with destruction of communication networks and landslides blocking roads for recovery teams, and heavy rainfall further hampered rescue. The Post-Disaster Needs Assessment (PDNA) generated by Nepal's National Planning Commission (NPC) put a value of NPR 706 billion (US\$ seven billion) on the direct and indirect impact of the earthquake to the country's economy (National Planning Commission [NPC], 2015). The PDNA also noted that the earthquake affected some 2900 structures of cultural and religious heritage value (NPC, 2015: 15), with a number of monuments in Kathmandu's seven World Heritage Monument Zones being severely damaged or



**Figure 1.** Community-led Saptabidhānuttar Pūjā and prayer ceremony following the completion of the research.

collapsed. The total estimated damage to tangible heritage amounted to NPR 16.9 billion (US\$ 169 million).

One of the key monuments to collapse was the Kasthamandap, a Medieval rest house within the Hanuman Dhoka Durbar, or royal square, of Kathmandu. Acknowledged to be the eponymous monument of the Valley, it became the focus of an international partnership to investigate its ruins and support its reconstruction, a partnership which will be assessed on its equitability in a later section of this paper (Figure 1). The UK-Nepal partners comprised the following groups:

- archaeologists and geoarchaeologists from Durham University's UNESCO Chair on Archaeological Ethics and Practice in Cultural Heritage;
- archaeologists and heritage managers from the Department of Archaeology, Government of Nepal;
- community engagement and intangible heritage specialists from Durham University, Tribhuvan University, Nepal and the Pakistani NGO Laajverd;
- architectural and engineering specialists from Nepal's chapter of the International Council on Monuments and Sites (ICOMOS), Durham University and Newcastle University;
- the Nepal field office of the United Nations Educational, Scientific and Cultural Organization (UNESCO); and
- local communities and their elected legislators.

Rather than recounting our interdisciplinary methodological approach to the field and laboratory research at the Kasthamandap, which is available elsewhere (Coningham et al., 2019; Coningham and Weise, 2019), we draw from our collective reflections and lessons learned to present this case study of the ways in which we attempted to enable equitable and ethical research partnerships between UK and Nepali colleagues as well as local communities in a time of crisis. These were gathered through informal team meetings, general debriefing meetings, academic and practitioner workshops, interviews, anonymous surveys and during the generation of co-authored papers and exhibitions. We briefly describe the role of archaeologists in post-disaster contexts and highlight three of the main types of challenges encountered while undertaking research in a crisis-setting and provide indicative examples: financial and capacity challenges; research ethics, and health and safety challenges; and broader challenges of intervention. While some are specific to the heritage sector, most would apply directly to any research conducted in crisis or post-disaster settings. We then use the TRUST Code (Schroeder et al., 2019; TRUST, 2018) to assess the character of our collaboration.

## **The potential role of archaeologists in post-disaster contexts**

First responders to crises typically include military and police units, firefighters, engineers, architects, health professionals, planners, drone teams and government officials funded by state parties, International Government Organisations and Non-Government Organisations. In immediate post-disaster contexts, heritage protection and archaeological research interventions are rarely a priority, where saving lives, providing shelter, food, security and access to health care are paramount. Indeed, research in crisis settings faces significant challenges (Shanks and Paulson, 2022). However, as acknowledged in our submission to the *Global Research and Action Agenda on Culture, Heritage and Climate Change*, disasters, human or natural, often overwhelm pre-planned emergency responses, a situation that in turn compromises heritage research and protection agendas and protocols (Morel et al., 2022). In the rush to rapidly reconstruct, international mitigation practices and interventions may further damage heritage, alienate local communities, Indigenous practitioners and researchers, as well as neglect interdisciplinary evaluations to understand what went wrong and lessons to be learnt.

Working with local experts and communities through community engagement to learn about sites, recover artefacts and to support the repair and reconstruction of damaged buildings and monuments, archaeologists can help to strengthen communities, re-establish trust, encourage people's pride and ownership of monuments (especially working ones), and support structures that help to ensure future oversight and management after the 'Disaster Industry' has moved on (Chapagain, 2023; Coningham and Lewer, 2019).

## **The challenges of undertaking research in a crisis setting**

While the challenges of undertaking equitable research in insecure settings has been discussed elsewhere (Dunia et al., 2023; Shanks and Paulson, 2022), less focus has been placed on its intersection with heritage. The Heritage of South Asia faces an increasing number of threats, ranging from natural disasters, such as earthquakes, to the impacts of accelerated development and conflict (Cunningham and Lewer, 2019). To raise awareness of these threats and challenges, with South Asian partners from Bangladesh, India, Myanmar, Nepal, Pakistan, and Sri Lanka, we co-designed and hosted an international workshop ‘Heritage at Risk 2017: Pathways to the Protection and Rehabilitation of Cultural Heritage in South Asia’ in Kathmandu in September 2017, funded by a grant from the UK’s Arts and Humanities Research Council Global Challenges Research Fund. During this meeting, and subsequently, we distinguish three main types of challenges when undertaking research in a crisis-setting, and provide indicative examples:

### *Financial and capacity challenges*

- Most funding for those in Higher Education Institutions (HEIs) is held by national research agencies with time-consuming processes of peer review and a primacy placed on research excellence rather than crises responses, public utility or agility/expediency.
- National research agency funding cycles are short term, which is problematic for research continuity within protracted crises.
- HEIs seldom have capacity to release staff at short notice to participate in crises research, and notifications of the award of grants often give little notice before start dates, creating challenges for delivery of core duties at home HEIs.
- Negotiating partnerships with local colleagues already involved in crises settings is challenging, as research is not always recognised as a priority by their own line managers and coordinators.
- Colleagues already involved in crises settings often find Intellectual Property agreement contracts issued by UK HEIs intimidating and confusing.
- Logistics, such as accommodation, transport, food, and power are often restricted in crises settings and organising in a manner that does not detract/distract resources from humanitarian priorities is complex.
- HEI financial controls of funding are not readily compatible with dynamic field demands for receipting and the use of cash in crisis contexts.
- HEI focus on closed UK Research Excellence Framework (REF) Impact assessment cycles leaves UK-based researchers with ongoing research partner legacy obligations without funding or time allocations.



### *Research ethics, and health and safety challenges*

- Formal permission for all archaeological work needs to be first obtained from the Director-General of Nepal, and visas need to be obtained for foreigners, both potentially time-consuming processes.
- Research agencies require detailed ethics and risk mitigation strategies to be submitted with grant applications prior to deployment of HEI-based teams.
- HEIs require additional ethics approval, as well as health and safety approvals, if engaging with local research participants.

### *Broader challenges of intervention*

- Most HEI staff lack experience of heritage research in post-disaster contexts.
- Many experts and practitioners deployed during disaster and post-disaster interventions are unaware of local cultural sensitivities and values.
- Practitioners and custodians of traditional/intangible knowledge systems have fewer formalised qualifications and frequently find their relationships with formally educated colleagues, such as engineers and architects, asymmetric, and struggle to demonstrate the financial basis to engage with donors and procurement procedures.
- Tangible and intangible heritage are often recorded and managed separately, and traditional/intangible knowledge systems are neglected. As a result, such practitioners are frequently excluded with communities denied custodianship, leaving heritage sites marooned and of limited sustainability.
- Incoming research groups frequently do not embed ethical and equitable partnerships, mapping/recording is frequently duplicated and seldom articulated with management tools, and researchers seldom engage with policy and decision-makers.
- International research groups often find it difficult to extract themselves and hand over legacy and custodianship to local partners.
- The sharing of lessons learned, including approaches/successes and challenges/performance is too little, too late.

## **Equitable and ethical research partnership at the Kasthamandap**

When the financial and administrative hurdles have been met and approvals, including from relevant research ethics, and health and safety decision-making bodies have been obtained, ethical and equitable research partnerships are still not guaranteed. One way of determining systematically whether our partnership between the UK and Nepal at the Kasthamandap was conducted equitably is to map it against

*The TRUST Code – A Global Code of Conduct for Equitable Research Partnerships* (TRUST, 2018) as a guide. The TRUST Code consists of 23 articles linked to four values: fairness, respect, care and honesty, and has been adopted across the research cycle from funders, such as the European Commission, to publishers, such as NATURE and SAGE. Having become aware of the TRUST Code during the 2023 ALLEA (All European Academies) scientific symposium ‘Crises and the Importance of Research: How Prepared Can We Be’, we outline below how the Kasthamandap partnership fared when assessed against the summarised articles of the TRUST Code, bearing in mind that our research programme was not designed around these.

## Fairness

TRUST article	What worked well	Traffic light
<i>A1: Research is locally relevant</i>	<ul style="list-style-type: none"> <li>The Kasthamandap was selected as our key focus through discussions between UK and Nepali partners.</li> </ul>	<b>Green</b>
<i>A2: Local communities and research participants are included</i>	<ul style="list-style-type: none"> <li>Local residents, elected legislators, craft-people, tour operators, businesses and tourists were consulted, and field teams included local heritage experts, heritage managers, HEI staff and students.</li> </ul>	<b>Green</b>
<i>A3: Meaningful feedback on results is provided</i>	<ul style="list-style-type: none"> <li>Feedback was provided during oral briefing meetings from Nepali partners and UK-based staff, and through papers, report and online dual lingual exhibitions: <a href="https://stories.durham.ac.uk/resilience/">https://stories.durham.ac.uk/resilience/</a></li> </ul>	<b>Green</b>
<i>Art 4: Local researchers are included throughout the research process</i>	<ul style="list-style-type: none"> <li>Co-publication with Nepali partners was core practice, from reporting the pilot through to the final report. Co-publications included international Open Access journals as well as easily accessible publications in Nepal.</li> <li>The project was co-directed by one named lead from the UK and one from Nepal.</li> </ul>	<b>Green</b>
<i>Art 5: Material transfer agreements are signed</i>	<ul style="list-style-type: none"> <li>Scientific samples were exported to the UK. This was approved by Nepal’s Ministry of Culture, Tourism and Civil Aviation as there were no facilities available in Nepal. Results were shared with Nepali-based partners.</li> </ul>	<b>Green</b>
<i>Art 6: Culturally appropriate benefit sharing plan for traditional knowledge</i>	<ul style="list-style-type: none"> <li>Traditional systems of seismic adaptation and termite control were recorded, and integrated with scientific analysis, before being consolidated into the local reconstruction plan.</li> </ul>	<b>Amber</b>
<i>Art 7: Local support staff are remunerated fairly</i>	<ul style="list-style-type: none"> <li>Nepali translators and coordinators were fairly compensated for their participation at local rates.</li> </ul>	<b>Green</b>

## Respect

TRUST article	What worked well	Traffic light
<i>Art 8: Cultural sensitivities are explored in advance</i>	<ul style="list-style-type: none"> <li>The Nepali-UK team partnership was well-established, having worked collaboratively in Kathmandu, and elsewhere in Nepal, for a number of years.</li> <li>The nature of the partnership allowed the embedding of cultural awareness within the project design as well as regular informal adjustments to practice.</li> </ul>	<b>Green</b>
<i>Art 9: Community assent is sought</i>	<ul style="list-style-type: none"> <li>Briefing meetings with local elected legislators and their communities were regularly held during fieldwork.</li> <li>The team ensured that the site remained open and accessible to local communities and encouraged informal and formal visits, particularly for them to undertake their intangible practices.</li> </ul>	<b>Green</b>
<i>Art 10: Local ethics review is sought</i>	<ul style="list-style-type: none"> <li>Approval for fieldwork was provided by the Director-General of Archaeology, Government of Nepal through a formal MoU, following submission of the proposed activities.</li> </ul>	<b>Green</b>
<i>Art 11: Respect for local research ethics committees</i>	<ul style="list-style-type: none"> <li>No Nepalese research ethics committee was involved in the approval.</li> </ul>	Nil

## Care

TRUST article	What worked well	Traffic light
<i>Art 12: Locally adapted informed consent procedures</i>	<ul style="list-style-type: none"> <li>Consent forms for community participants were co-designed between Nepali partners and the UK-based team.</li> <li>Pilot evaluation of the forms resulted in enhanced local adaptations.</li> <li>Informed consent was obtained from illiterate members of the community via oral briefings offered by local partners.</li> </ul>	<b>Green</b>
<i>Art 13: Possibilities to raise complaints about the research</i>	<ul style="list-style-type: none"> <li>Regular meetings with research participants and local partners ensured that any concerns with the research process could be raised.</li> <li>Community participants were informed of the process for feedback and complaints on the consent forms.</li> </ul>	<b>Green</b>

(Continued)



(Continued)

TRUST article	What worked well	Traffic light
<i>Art14: Research that would be severely restricted in a high-income setting should not be carried out in a lower-income setting.</i>	<ul style="list-style-type: none"> <li>• Not applicable.</li> </ul>	Nil
<i>Art15: Avoid research participant stigmatization, incrimination and discrimination</i>	<ul style="list-style-type: none"> <li>• Not applicable.</li> </ul>	Nil
<i>Art16: Determining in advance whether local resources will be depleted because of the research</i>	<ul style="list-style-type: none"> <li>• Deployment was subject to the formal approval of the Director-General of Archaeology, Government of Nepal, and UNESCO's field office.</li> </ul>	<b>Green</b>
<i>Art17: Animal experimentation should always be undertaken in line with the higher standards of protection</i>	<ul style="list-style-type: none"> <li>• Not applicable.</li> </ul>	Nil
<i>Art18: Research should always be undertaken in line with higher standards of environmental protection.</i>	<ul style="list-style-type: none"> <li>• Standards and compliance remained at the level agreed in the co-design stage by the Durham University approvals process.</li> </ul>	<b>Green</b>
<i>Art19: Tailored risk management plans should be agreed between the research team and local partners.</i>	<ul style="list-style-type: none"> <li>• Tailored risk assessments for UK-based staff were approved prior to leaving the UK. These risk assessments were shared with Nepali partners and volunteers.</li> <li>• Insurance cover was not provided for Nepali partners.</li> </ul>	<b>Amber</b>

## Honesty

TRUST article	What worked well	Traffic light
<i>Art20: Roles and responsibilities are agreed in advance, including the potential for capacity building</i>	<ul style="list-style-type: none"> <li>• UK-based staff and Nepali partners were engaged in co-design from the outset, with clarity concerning responsibilities and roles.</li> <li>• Capacity-building plans for local researchers were <i>implicitly</i> rather than explicitly stated.</li> </ul>	<b>Amber</b>
<i>Art21: Relevant information is given in local languages and without jargon</i>	<ul style="list-style-type: none"> <li>• Information was provided in Nepali and English.</li> <li>• Information was shared with illiterate members of the community via oral briefings offered by local partners.</li> <li>• Text was co-authored by UK-based staff and Nepali partners, including temporary and online exhibitions.</li> </ul>	<b>Green</b>
<i>Art22: No corruption and bribery</i>	<ul style="list-style-type: none"> <li>• All field financial transactions and payments for staff and materials were scrutinised by independent UK-based accounts staff.</li> </ul>	<b>Green</b>
<i>Art23: Data protection standards and compliance procedures did not lead to privacy breaches.</i>	<ul style="list-style-type: none"> <li>• Standards and compliance remained at the UK level agreed in the co-design stage by the Durham University approvals process.</li> <li>• There were no privacy breaches.</li> </ul>	<b>Green</b>

From the above dashboard, it is clear that our Nepali and UK-based partnership at the Kasthamandap performed well against the TRUST Code. We fully acknowledge that there was also room for improvement as indicated by the Amber traffic lights. First, culturally appropriate benefit sharing plans for traditional knowledge were *implicitly* rather than explicitly stated (Art 6); secondly, insurance cover was not provided for Nepali partners (Art 19); and, finally, capacity-building plans for local researchers were *implicitly* rather than explicitly stated (Art 20). However, traditional knowledge systems, such as seismic adaptation and termite control, were recorded, and integrated with scientific analysis, before being consolidated into local reconstruction plans. In addition, capacity-building benefitted from ongoing efforts to locate new opportunities and resources as we were able to facilitate the visit of Nepali partners to the UK to participate in workshops and visit specialist laboratories processing samples from the Kasthamandap, as well as offer a fully funded PhD studentship at Durham to one of the local experts. Significantly, we were able to raise funds from the Oriental Cultural Heritage Sites Protection Alliance to support travel and subsistence for colleagues from India, Myanmar and Sri Lanka to participate in the post-disaster interventions in Kathmandu, thus reinforcing invaluable South Asian- wide peer to peer experience and incubating south-south-north networks.

## Conclusion

Our multidisciplinary archaeological, geoarchaeological and engineering investigations at the Kasthamandap, combined with engagement with community members and traditional/intangible knowledge practitioners, revealed ancient hazard-resilient architectural knowledge systems. These included monumental symmetrical foundations, which minimised seismic motion and the use of ‘engineered’ soil to reduce the risk of liquefaction as well as the sheeting of timber elements in copper to retard biological growth and termite infestation. We also co-designed processes for the recycling of disaster debris with first responders, methods which were later successfully applied to conflict scenarios. Following the completion of our fieldwork in Nepal, the Kathmandu-based Kasthamandap Reconstruction Committee integrated our analysis and reports into their approach, and the Kasthamandap was rebuilt with full participation of local communities and their local elected legislators (Figure 2 ). The narrative of this remarkable success was formally recorded by the Reconstruction Committee in their own Nepali, Newari and English language volumes (Weise and Joshi, 2022), which reinforces the nature of our long-term equitable research relationships in Nepal built on trust and reinforces the lesson that international research groups need to recognise the right timing to extract themselves and leave legacy to local partners.



**Figure 2.** View of the Kasthamandap after its reconstruction in 2022.

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## Ethical approval

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