Post-disaster housing reconstruction in urban areas in Nepal

Aid governance and local rebuilding initiatives

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The Earth Observatory of Singapore conducts fundamental research on earthquakes, volcanic eruptions, tsunamis and climate change in and around Southeast Asia, towards safer and more sustainable societies.

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The Urban Reconstruction in Nepal Project is a research initiative to investigate aid governance, community-driven reconstruction initiatives and the rebuilding of historic urban settlements damaged by the 2015 earthquakes in the Kathmandu Valley, Nepal. This research was motivated by the lack of reconstruction progress in urban settlements one year after the earthquakes, and was carried out in conjunction with the Housing Recovery and Reconstruction Platform–Nepal and the Earth Observatory of Singapore. We conducted ethnographic fieldwork in five urban settlements over a period of 18 months. Our research shows that the delay in urban reconstruction was a function of the lack of a clear and well-supported policy for urban reconstruction; limited governance capacity and neglect of municipal- and ward-level officials; financial restrictions caused by the funding cap per family to rebuild their homes; and the lack of a framework to support local community-driven rebuilding initiatives.

Contents

Summary

In an increasingly urbanised world there is a growing awareness of the impact of disasters in urban environments and of the complex challenges in rebuilding urban areas following large-scale disasters (Tierney, 2012; Coyne and Lemke, 2012; Crisp *et al*., 2012; Delias and Daly, 2016; Duyne Barenstein, 2014; Miller and Douglas, 2016a, 2016b; UNISDR, 2012). Population density, interconnected webs of physical infrastructure, heightened poverty and lax enforcement of building codes have heightened vulnerability in many cities, especially within the developing world, and complicate rebuilding after destructive events (Pelling, 2003).

A review of past international disaster responses indicates that when disasters affect both rural and urban areas, given a choice international humanitarian agencies prefer to focus on rural areas (Macrae and Hodgkin, 2016). This was the case, for example, in Gujarat (India) following the earthquake of 2001, in Sri Lanka and India after the Indian Ocean tsunami of 2004, and in Pakistan after the earthquake of 2005. In all these countries, urban reconstruction was carried out within the framework of national reconstruction programmes, with only limited support from international humanitarian agencies. In particular, urban rebuilding efforts have struggled to navigate through the complex range of stakeholders involved in urban environments (Daly and Feener, 2016; Edgington, 2010; Gasparini *et al*., 2014; Olshansky and Johnson, 2010; Simpson, 2014; Chang *et al*., 2010; Chang *et al*., 2011; Jha and Stanton-Geddes, 2013; Parker and Maynard, 2015; Daly *et al*., 2017; Miller and Douglas, 2016b), and have largely failed to address the housing rights of under-propertied people such as informal settlers and renters (Duyne Barenstein, 2017). After the earthquake that severely affected the city of Port-au-Prince in Haiti, humanitarian agencies could no longer avoid cities and were forced to concentrate their aid in urban areas. This led to an awareness of the lack of institutional knowledge and experience operating in urban areas, of the rural bias of most reconstruction guidelines and handbooks, and of the urgent need to better understand the opportunities and challenges of urban reconstruction.

This report contributes to refining approaches for rebuilding housing in urban areas by analysing the case of Nepal, which was hit by two severe earthquakes in April and May 2015. Two years after the earthquakes, progress with housing reconstruction in Nepal is slow in both rural and urban areas. According to the Housing Recovery and Reconstruction Platform–Nepal (HRRP), more than 80 per cent of households eligible for financial support to rebuild their houses had received the first instalment by June 2017, but only 13 per cent had actually started reconstruction with financial and technical support from the government and/or NGOs.[1] However, in the two years since the earthquakes, more concerted efforts have been made to rebuild rural communities. In part, this is explained by evaluations showing higher levels of vulnerability in more remote, rural areas. Furthermore, the housing grants provided by the government of Nepal, which are capped at approximately US$ 3,000, are more appropriate for rebuilding single-family dwellings in rural areas rather than much more expensive urban dwellings. With that said, we feel that the neglect of urban areas is at least partly a function of the complexities and uncertainties that come with rebuilding in urban areas, which leaves many organisations unable or unwilling to commit to urban reconstruction.

Unfortunately, the case of Nepal does not lend itself to illustrate good practice, but rather to prove that much remains to be learned about rebuilding urban environments. Indeed, reconstruction in Nepal is yet another example where urban reconstruction lags behind rural reconstruction, and raises a number of important questions. What is slowing down reconstruction in urban Nepal? Is such a delay inevitable, or could a better understanding of the urban context and different approaches have allowed a more effective response? What are the challenges faced by individuals, communities, municipalities and national and international humanitarian agencies to rebuild urban Nepal? What factors have led to the delay in housing reconstruction in urban areas? What are the risks and the consequences of these delays? How could urban reconstruction be accelerated? What are the general lessons that can be learned from the Nepal case?

[1] http://www.hrrpnepal.org/housing-update

To answer these questions, we analyse local, national and international responses to the earthquakes, and the progress of rebuilding in five case study settlements in the Kathmandu Valley. In this report, we focus on the governance structure of the reconstruction, including the role of the National Reconstruction Authority (NRA), international actors, local government officials and community-based organisations. As mentioned above, and as will be further discussed below, two years after the earthquakes progress with the implementation of the national reconstruction programme remains slow and self-financed, and hence unregulated reconstruction is not very prominent either. As will be discussed in the analytical conclusions of this report, there are many factors that constrain urban reconstruction, with the unaffordability of 'building back better' in an urban context being one of the principal causes.

1

Damage caused by the earthquakes

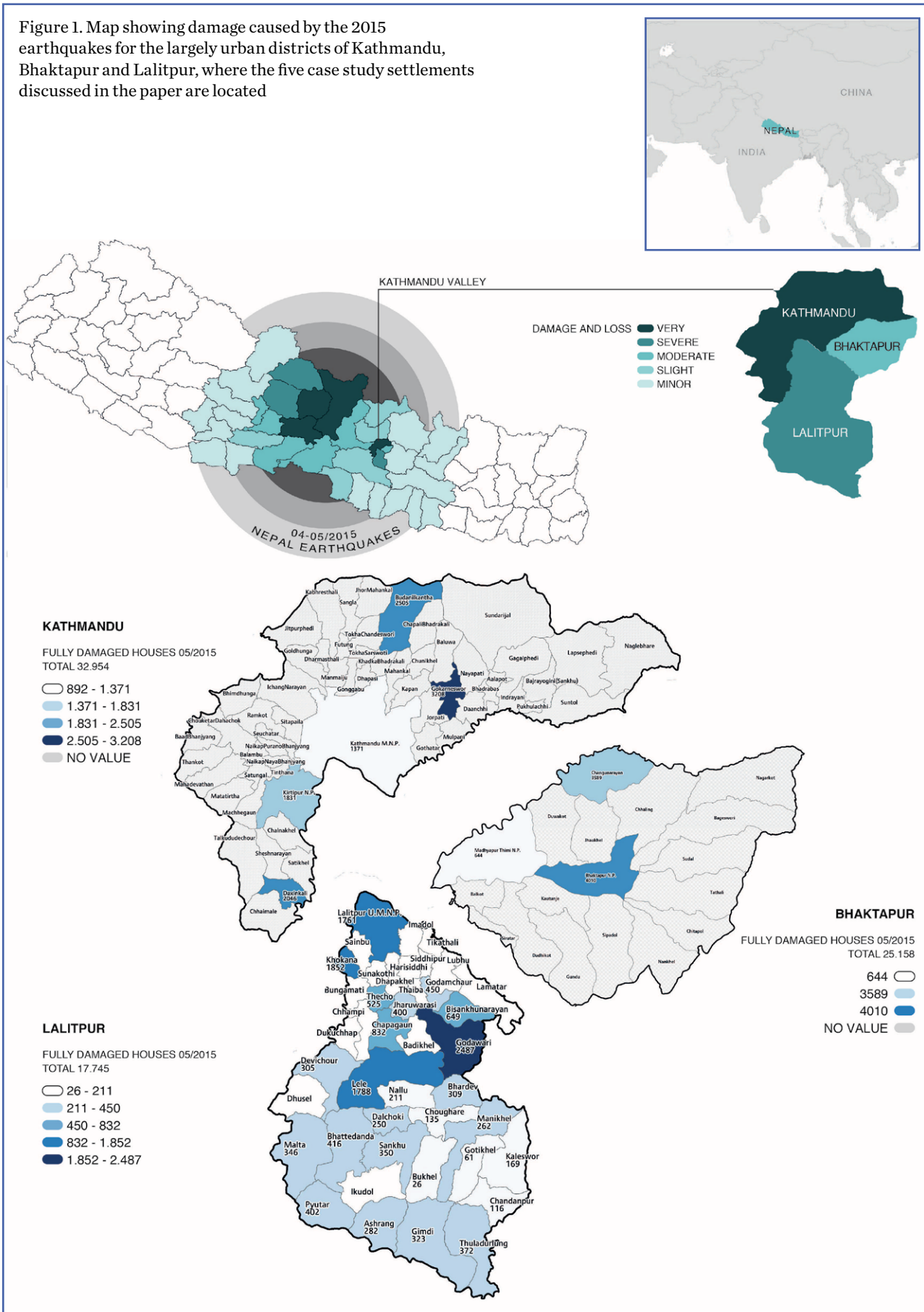
*I*n April and May 2015, two earthquakes measuring 7.8 and 7.3 magnitude, respectively, hit central Nepal, causing extensive loss of life and damage. The initial earthquake killed more than 8,700 people and injured more than 22,000 others. More than 7,000 schools were completely destroyed. Nearly 500,000 houses either collapsed completely or were damaged beyond repair, while more than 250,000 houses were partially damaged. According to the National Planning Commission–Post-Disaster Needs Assessment (NPC–PDNA, 2015) – a comprehensive two-volume account of the effects of disaster and relief and reconstruction needs – the housing and human settlement sector alone needed approximately US$ three billion. As per an estimate made in the PDNA (NRA–PDRF, 2016), the total number of houses to be reconstructed is 609,938.

Thirty-three out of the 75 districts in Nepal were affected by the earthquakes and 14 were classified as severely affected. To understand the impact of the 2015 earthquakes at a broader and deeper level in these 14 districts, it is important to take their geographic, cultural, demographic and socioeconomic factors into consideration.[2] These 14 districts encompass a wide geographical range: mountainous regions, such as the Rasuwa district; hilly regions, such as Sindhupalchowk; the valleys, such as Kathmandu; as well as regions that may be considered foothills, such as Nuwakot. Of these 14 districts, nine have a human development index lower than the national average in sectors such as average income, education and health outcomes. This means poorer households were most likely pushed further below the poverty line by the earthquakes, and may remain there if reconstruction and rehabilitation efforts do not mitigate the effects of disaster (NRA–PDRF, 2016).

These wide geographies also represent significant cultural and socioeconomic diversity, which has shaped both the impact of the disaster and the trajectory of relief, recovery and reconstruction.[3] Different districts have different challenges and hence require different levels of assistance. Each of the settlements and neighbourhoods in these districts is unique and exposes different issues, as shown in our discussion of the case study settlements below. This raises critical questions about how well a national-level programme can accommodate the myriad of contexts and stakeholders affected by the 2015 earthquakes. In this context, we provide brief accounts of the impact of the earthquakes in Patan (or Lalitpur) and Kathmandu. Figure 1 shows the damage incurred in these areas in the Kathmandu Valley.

[2] A district is an administrative region comprising a number of municipalities, the urban centres that control adjoining towns and peri-urban areas; a village council is a similar administrative centre that governs the rural and remote areas.
[3] For example, Rasuwa is a remote mountain district bordering Tibet in the northeast of Nepal. It is mostly inhabited by the Tamang – an indigenous group that has been disadvantaged historically. They generally lack recognition as 'modern citizens' and are under-represented within the state whether as recipients of social welfare or as members of the government bureaucracy. A few widely circulated journalistic reports claim that this historic marginalisation of the Tamang was replicated and exacerbated in Rasuwa in the wake of the earthquakes, and still continues, at a time when all districts are supposed to be undergoing reconstruction.

Figure 1. Map showing damage caused by the 2015 earthquakes for the largely urban districts of Kathmandu, Bhaktapur and Lalitpur, where the five case study settlements discussed in the paper are located



Housing Recovery and Reconstruction Platform – Nepal, 2015

1.1 Urban impacts of the earthquakes

In the urban settlements in the Kathmandu Valley, four broad types of structures were damaged by the earthquakes: public and administrative government buildings (including public schools and public hospitals); cultural, religious and heritage sites (such as temples, public squares, waterspouts and rest houses that represent the rich architectural history of the Malla period); commercial spaces (such as shops, businesses, etc); and private houses and dwelling units such as high-rise apartment buildings.

In urban settlements, all four of these categories of place overlap and often occupy the same location (such as mixed-use, multi-storey structures for both residence and business). The settlements can be loosely categorised as: traditional and historic settlements inhabited by the Newar; mixed-housing modern settlements; and informal settlements. In this study, we focus upon historic Newari settlements. Within such settlements, nearly 90 per cent of the houses are 'semi-pakki', or semi-permanent. The walls are built using bricks and soil, and the roofs of tiles or tin sheets. Traditional urban houses are constructed around a residential square, where the extended family members reside. The square often contains a miniature temple, large waterspouts or a well, which not only secure access to water but also provide the opportunity to socialise, merging the private and the public space, as illustrated in Figures 2a–b and discussed in Box 1.

Typically, a Newari house has three to four storeys constructed of red bricks laid out on mud mortar. Timber is used for floors, doors, windows and the roof structure. The windows facing the street are richly carved and ornamented (Figures 3a–c). The Newari housing tradition and urban planning are very much linked to socio-religious traditions, rules and understandings. As Sengupta and Upadhyay (2016, p. 96) describe:

> "*As early as the mid-14th century, the Newar rulers established clear guidelines on what a house should look like and its value using religious scripture as a basis for settlement planning. These religious rules of allocating spaces based on one's caste group are a clear and early example of how rules regarding urban space have been used to reflect and reinforce social status.*"

These urban planning regulations are still reflected within the urban areas in the Kathmandu Valley.

Figure 2.

2a: A public square with a shrine organised by inhabitants in Patan, surrounded by rubble.

2b: The communal pool in Bungmati. Photos by Patrick Daly

BOX 1. NEWAR COMMUNITY DYNAMICS

These settlements are mainly occupied by the Newar, an ethnic community indigenous to the Kathmandu Valley. The physical structure of Newari settlements is the result of several centuries of construction, and reflects their social organisation, cultural practices and aesthetics. Historically, the Newar have been artisans, traders, potters, weavers and farmers. Newari settlements are compact, with interconnected buildings framing courtyards and narrow alleyways. Houses commonly have commercial space on the ground floor, topped by residential units. The exceptional architectural style and embedded cultural characteristics of Newari settlements have been recognised by the UN Educational, Social and Cultural Organisation (UNESCO) as the collective Kathmandu Valley World Heritage Site.

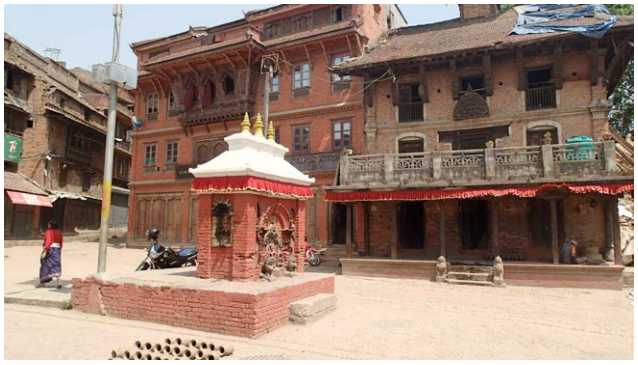
Important to our study is the socially cohesive nature of the settlements, and the informal governance mechanisms within Newar communities that influence decision-making, labour mobilisation and access to various forms of capital. The sociocultural life of the Newar was historically governed by a *guthi*, an endogenous organisation consisting of senior members of the settlement and representatives of households. The chairman and senior residents decide through consensus who occupies leadership positions. *Guthis* mostly oversee mortuary rituals and religious and cultural festivals, including the maintenance of traditional structures such as temples, rest houses and waterspouts.

While *guthis* reflect the Newar's strong organisational capacity and inclination towards collective action, they are less involved in functional issues related to urbanisation and modernisation, such as upgrading and maintaining physical infrastructure. These domains are more the concern of neighbourhood associations or neighbourhood improvement committees, which assume considerable responsibility for practical administrative matters. However, membership of such associations is only open to landowners. Property ownership, based on historical practice and mandated by the Local Self-Governance Act 1999, is a necessary legal condition for residents to formally participate in the processes of local governance.

Figure 3.

3a: Example of ornate carved wood windows and doors in Patan.

3b: A newly refurbished Newari house in Pilachhen.



3c: Traditional Newari structures and shrine in Bhaktapur. Photos by Patrick Daly

2

Disaster response and governance structure

Immediately following the April 2015 earthquake, numerous government agencies at all levels participated in relief efforts. At the local level, ward offices played a significant role as a conduit for distributing relief materials and conducting preliminary damage assessments.[4] An initial beneficiary list prepared at the ward level was sent to the Disaster Management Division within the Home Ministry, which allocated up to US$ 150 per beneficiary as a relief fund, and an additional US$ 100 as a 'winter' relief fund to persons affected by the earthquake.

In May 2015, the government of Nepal (GoN) issued a master plan for rebuilding, which was largely centred on principles of vulnerability reduction, a fair and equitable distribution of aid, and an owner-driven reconstruction model for housing (the Post-Disaster Recovery Framework – PDRF). The GoN established the Nepal Reconstruction Authority (NRA) to provide a centralised, dedicated institution to oversee the reconstruction. The NRA was loosely influenced by similar agencies established in Indonesia following the 2004 Indian Ocean tsunami and in Pakistan following the 2010 Kashmir earthquake. The main roles of the NRA are to oversee housing grant distribution, conduct environmental impact assessments, manage land acquisition, land registration and public procurement, issue reconstruction guidelines and coordinate the efforts of NGOs and donors. This was done to ensure Nepali control over the reconstruction as well as eliminate the poor coordination of aid agencies and inefficient use of resources that were widely reported in other post-disaster situations, such post-tsunami Indonesia and Haiti following the 2010 earthquake (Schuller, 2016; Telford *et al.*, 2006).

The NRA, which initially lacked formal legal status, was led by the prime minister until August 2015, when a new CEO was appointed. The CEO had previously served as the vice chairman of the National Planning Commission, which led the Post-Disaster Needs Assessment (PDNA) in 2015 – a two-volume document that provided a comprehensive account of the earthquake-induced damage and identified subsequent needs. The PDNA was prepared in collaboration with a consortium of the EU, World Bank, UNDP, Asian Development Bank and Japan International Cooperation Agency, and focused mainly on policies for reconstruction in rural areas. However, less than a month after the appointment of the CEO, as part of a tussle between political parties vying for the NRA chairmanship, the GoN suspended the NRA, citing its lack of legal status.

Between September and December 2015, all reconstruction-related matters were overseen

[4] In this paper we refer to ward, municipal and district government offices. A ward office is the smallest administrative unit of the municipal government. It is led by a locally elected ward chairperson, along with four other elected members. A ward council serves as a conduit between the municipal council and the local community. In practical terms, the ward office conducts administrative tasks such as providing letters of endorsement in support of a resident's application for a citizenship card, to soliciting proposals for local development projects from the community. A municipality oversees a wide range of development projects within the city related to road maintenance, waste management, infrastructure upgrading, etc. The municipal office coordinates its activities with agencies such as the Kathmandu Valley Development Authority, the Road Department, the Department of Urban Development and Building Construction, etc. Municipalities can collect local taxes to provide part of their revenue stream. District Coordination Committees – DCCs (formally District Development Committees) are responsible for coordinating and overseeing development and governance-related work within the municipal and local bodies. This includes allocating financial resources and staff members to the lower-tier governance structures where necessary.

centrally by the Ministry of Federal Affairs and Local Development and the Ministry of Urban Development, and were carried out locally by municipal and local government bodies such as village development committees (VDCs) and ward offices. During this period, reconstruction largely stalled as all stakeholders waited for an officially approved reconstruction policy, damage assessment, beneficiary list and new by-laws and building codes – all of which were promised by the GoN. The NRA was revived in December 2015 with the appointment of a new CEO – this time as a formal legal body backed by legislation with a stated mission statement and organisational structure.

The Reconstruction and Resettlement Policy 2072 (2016) acts as the main guide to all NRA activities. According to the NRA progress report in April 2016, rules and guidelines were approved for housing grant distribution; environmental impact assessment; land acquisition; public procurement; reconstruction regulation; land registration; and working with non-governmental organisations. In procedural terms, the housing grant, valued at approximately US$ 3,000, is divided into three tranches and is discussed in more detail in Box 2. A 'beneficiary' is eligible to receive the first tranche after the completion of the foundational structure of the house, the DPC (damp proof course).

BOX 2. HOUSING GRANTS AND SOFT LOANS

A total of 510,762 houses were completely destroyed by the 2015 earthquakes and a further 291,707 were damaged. The National Reconstruction Authority listed 717,251 families as eligible to receive reconstruction aid, mostly in the form of housing grants. More than 500,000 families signed the housing aid agreement with the government, which entitled beneficiaries to receive a total of approximately US$ 3,000, paid in three instalments. The first instalment of US$ 50 was paid once the beneficiary had signed the housing grant agreement, having gone through a verification process. The second instalment of US$ 150 was to be paid after the beneficiary had laid the foundations and structure of the house. However, before the foundations could be laid, the homeowner had to obtain a building permit based upon blueprints of their proposed house. The final instalment was to be released once the beneficiary had installed the roof – thus completing the structure of the house. As of June 2017, approximately 560,000 families had received the first instalment of the housing grant; 18,000 had received the second instalment; and 1,205 had received the third.

In our five case study settlements in the Kathmandu Valley, not a single beneficiary has received the second tranche of the housing grant. This lack of distribution of the second tranche means two things. First, the reconstruction of private houses, as envisioned by both the NRA and affected residents, has not taken place as planned. Second, those who have started reconstruction have done so without formally notifying the government, which would include obtaining a building permit from the municipality prior to rebuilding. One reason why some households have not processed the application for building permits is because they do not have formal land titles. Residents are compelled to circumvent municipal and local government and the NRA guidelines in order meet their urgent shelter needs and to resume small businesses.

However, even if housing grants were handed out on time after all the requirements had been fulfilled, the size of the grant is too small to help with the rebuilding process in urban areas without substantial additional funding. A basic, traditional-style Newari house for a family of four costs between US$ 30,000 and US$ 40,000. This estimate is based on the rebuilding plan prepared by a community reconstruction committee of one of the Newari settlements. The cost for constructing a non-traditional house for a family of four is a minimum of US$ 15,000. These estimated figures far exceed the housing grant that the NRA is providing. Therefore, the housing grant serves more as a symbolic gesture rather than an important source of financing. It is no surprise, therefore, that there are reports claiming that beneficiaries of the first and second tranches of the housing grant openly talk about using the money towards purchasing basic things that are unrelated to reconstruction.

The government of Nepal addressed this problem – of inadequacy of funds for rebuilding houses – by introducing a provision for 'soft loans' to earthquake victims listed as beneficiaries, with an interest rate of two per cent. Under this provision, earthquake victims in the Kathmandu Valley would be eligible for a maximum of approximately US$ 24,000, while those outside the Valley and in remote areas would get a maximum of about US$ 14,000. The problem, however, is that a majority of earthquake victims in our case study settlements are either unaware of the loan provision or have limited access to updated information that would enable them pursue the loan option. In addition, the conditions for obtaining the loan are the same as for obtaining the housing grant – present building permits while strictly adhering to the building codes and by-law mandates – which means residents experience similar obstacles. As such, the provision of 'soft loans' has so far been yet another case of false hope – promises on paper but unattainable in practice.

Table 1. Key roles of the National Reconstruction Authority (NRA–PDRF, 2016).

ROLE	DESCRIPTION
Allocating reconstruction funds	The National Reconstruction Authority (NRA) is responsible for allocating resources from the National Reconstruction Fund to ministries and implementing agencies to carry out recovery and reconstruction activities, based on the agreed priorities and plans.
Approving plans, budgets and programmes	The NRA will ensure that the plans, budgets and programmes of individual ministries contribute to a coherent recovery and reconstruction implementation effort.
Relocation and rehabilitation	The NRA is empowered to identify appropriate sites or acquire land for reconstruction, integrated settlement, rehabilitation and relocation, or to develop norms for these activities.
Collaborating with key stakeholders	The NRA will mobilise and collaborate with the government, the districts, the private sector, NGOs, and community and international organisations to deliver effective reconstruction.
Building implementation capacity	The NRA will build – and support others to build – special capacities through technical assistance, training and the use of external expertise.
Monitoring and quality control	The NRA will ensure the safety and quality of reconstruction works by government and partners, by using norms, standards, inspections, examinations and regular monitoring. It will also order the demolition and removal of unsafe structures or do so on behalf of owners in certain situations.
Ensuring accountability and transparency	The NRA will conduct public hearings at least once every six months. It will present a public report on reconstruction and expenditure and submit an annual report to the government of Nepal. A committee for grievance redressal will be available to those adversely affected during reconstruction.

The second tranche is available once the walls have been constructed and the final tranche can be accessed after roofing. The key roles of the NRA are listed in Table 1.

2.1 Structure of the NRA

The NRA consists of an advisory committee, a steering committee and an executive committee. The advisory committee has two members: the prime minister and the leader of the main opposition party. The NRA partnered with four ministries that serve as 'implementing agencies': Ministry of Urban Development (MOULD); Ministry of Federal Affairs and Local Development (MoFALD); Ministry of Education; and Ministry of Culture, Tourism and Civil Aviation. Within each ministry, the NRA established central project implementation units (CL–PIUs) to carry out practical tasks related to the reconstruction, as summarised in Table 2. In theory, the CL–PIUs receive their budgets directly from the NRA and are granted the authority to approve reconstruction tasks and implement projects and programmes at the district level.

To incorporate local government and community-based organisations (CBOs), the NRA was charged with establishing seven 'sub-regional offices' to coordinate between central and local authorities; 14 district-level project implementation units (DL–PIUs) to oversee coordination, implementation and monitoring of reconstruction-related activities at the district level; and 160 'local resource centres' (LRCs) to support community-based reconstruction efforts. These offices were intended to position the NRA closer to affected communities and to provide training for local NGOs and CBOs to increase their capacity to rebuild. The LRCs were authorised to work with external donors and NGOs, as well as carry out field-level projects with regard to beneficiary enrolment, training, communication and outreach, technical assistance, social mobilisation and reporting.

At the local level, the ward office is of critical importance for rebuilding houses as it is authorised to oversee housing, infrastructure and community projects in their respective areas. Under the NRA guidelines, the ward office should work with a 'mobile technical support team' provided by the LRC. These teams should consist of one engineer, one sub-engineer and one social mobiliser to assist with design approval, as well as the monitoring and evaluation of reconstruction projects. To be clear, this was the structure and the workflow as presented in the NRA guidelines and, as discussed below, does not necessarily reflect how things played out.

Table 2. Structure and proposed responsibilities of the National Reconstruction Authority (NRA–PDRF, 2016).

	NATIONAL RECONSTRUCTION AUTHORITY (NRA)	
National	National Reconstruction Authority (NRA)	Responsible for GoN reconstruction policy; coordinating internal and external stakeholders; allocating housing grants.
	Ministry of Urban Development (PIU)	Oversees reconstruction of houses, government buildings, relocation settlements; deploys engineers to VCDs and LRCs; provides technical support; establishes building construction standards.
	Ministry of Education (PIU)	Oversees reconstruction and repair of damaged schools and educational facilities.
	Ministry of Culture, Tourism and Civil Aviation (PIU)	Oversees reconstruction and repair of damaged heritage sites.
	Ministry of Federal Affairs and Local Development (PIU)	Oversees reconstruction and repair of government infrastructure; distribution of housing reconstruction grants.
Regional	Sub-Regional Offices	Coordinate between central authorities and local bodies; monitor progress and quality of reconstruction; solicit integrated reconstruction plans from VCDs, municipalities and districts, and facilitate implementation.
	District Coordination Committees	Committee in each earthquake-affected district; coordinate and monitor reconstruction activities in district; send reports to the NRA regional office.
Local	Local Resource Centres (LRCs)	Local hub for providing information about assistance available from GoN and other stakeholders; support communities to undertake their own reconstruction plans; address local grievances.
	Village Development Committees (VDCs)	Oversee implementation of housing and infrastructure at VDC level; establish a reconstruction project implementation unit staffed with engineers and social mobilisers.

The formation of the NRA was an attempt at consolidating and coordinating the governance of post-earthquake reconstruction by shifting the locus away from 'government' as it existed before the earthquakes. In the context of reconstruction, the Ministry of Urban Development (MoUD) and the Department of Urban Development and Building Construction (DUDBC), for example, were no longer the central government authorities and arbiters over matters related to infrastructure and structural developments in urban areas that normally fall under their portfolios. Rather, core tasks previously under the jurisdiction of established government agencies were shifted to the NRA. The rationale for this new mode of NRA-led governance was that there was a need for a strong and centralised authority to manage the scale of funds necessary for post-earthquake reconstruction. This authority was also important to strengthen, as well as fill in for, local and municipal government units citing a lack of local capacity. In practice, as we discuss in this paper and elsewhere (Daly *et al*., 2017), not only has the NRA not been able to effectively enact the central role of coordination and implementation as was envisioned, but many comment that its role in the reconstruction has largely been confined to transferring aid money from one government department to another.[5] To fill the void of reconstruction governance, an assemblage of formal and informal actors has taken up the mantle of governance for getting things done. In our case study settlements we explore ways in which local actors have engaged in rebuilding, and how their efforts have aligned with the formal disaster governance structures.

[5] The most blatant criticism of the NRA has come from within the NRA itself. In a recent public interview, the current CEO of the NRA, Govinda Raj Pokharel, points to the NRA's ineptitude by predicting its demise if it operates within the "*same powers and outlines as now*". http://www.myrepublica.com/news/16936/.

3

Methods and research context

To better understand the dynamics of local rebuilding initiatives in our case study settlements in the Kathmandu Valley we conducted:

- A comprehensive review of documentation related to the GoN's reconstruction plans, the NRA framework and plans drafted by NGOs and local community reconstruction committees (CRCs).
- Institutional analysis of the responsibilities and capacities of government agencies at all levels that are involved in the reconstruction of urban areas. We conducted interviews with members of the NRA, municipal- and ward-level civil servants, and staff from local and international NGOs involved in the reconstruction. We conducted a combination of formal and informal semi-structured interviews.[6]
- Detailed monitoring of reconstruction progress in the five case study settlements to determine the local drivers and inhibitors of rebuilding. Our field sites were chosen because they represent different rebuilding strategies. For each settlement we reviewed damage assessments and reconstruction plans and conducted semi-structured interviews with CRCs and key local stakeholders. We also identified a number of reconstruction initiatives, and monitored their progress between April 2016 and June 2017, with repeated field visits to map out changing rebuilding strategies.

The core team embarked upon two field mobilisations in April and June 2016 to select field sites, collect data and establish our research framework in Nepal. In addition, one of our team has been present in the Kathmandu Valley to monitor ongoing reconstruction activities and conduct follow-up interviews as needed.

Based upon a review of representative historic urban settlements in the Kathmandu Valley, we selected five case study areas for detailed analysis. The study areas are historic urban settlements that consist of densely integrated multi-level structures (Pilachhen; Bungmati; Harisiddhi; Thecho; and Machhegaun). These types of settlements have long been a highly visible component of Nepal's cultural heritage and are mainly occupied by the Newar. The physical structure of these settlements is the result of several centuries of organic construction, which reflects both family connections and the cultural practices and aesthetics of the Newar people.

[6] In each settlement, we picked five interviewees from the list of earthquake victims provided by the ward office, based on caste, gender and income. The semi-structured questionnaire touched on initial responses following the earthquake; ongoing reconstruction plans and activities; and future plans related to rebuilding. At the community level, we interviewed either the chairperson or secretary of each community reconstruction committee, with several follow-up interviews, paired with participant observation of reconstruction activities. Interviews with ward secretaries were preceded by informal conversations about reconstruction and were followed up with periodic phone interviews to track progress. We also conducted interviews with the municipal head and the head of the Urban Housing and Heritage Conservation Division (UHHCD) of the NRA, and with staff of the Nepali NGOs involved in three of the case study settlements (Lumanti and the Maya Foundation).

All study sites suffered structural damage, significant livelihood disruption and loss of life, as summarised in Table 3. The structural damage caused by the earthquakes varied within each settlement, with some buildings collapsing completely, some sustaining moderate damage and some not affected. Structural assessments conducted after the earthquakes suggest that multi-storey traditional buildings were especially vulnerable to collapse if they had not been well-maintained in the past (in part because many historic buildings had been used for low-income rental housing), potentially suggesting resident household affluence may have been a contributing societal factor to structural vulnerability.

Table 3. Case study settlements in the Kathmandu Valley, Nepal.

SETTLEMENT	POPULATION SIZE	DEATHS	HOUSES DESTROYED	KEY ACTORS IN RECONSTRUCTION
Bungmati	4,000	7	580	• UN–Habitat • Bungmati Area Reconstruction and Development Council • Embassy of Sri Lanka
Harisiddhi	10,000	24	550	• Harisiddhi Reconstruction and Rehabilitation Committee (HRRC) • Harisiddhi Engineers' Association • Lalitpur Society for Development
Machhegaun	3,500	4	386	• Lumanti • Oxfam
Pilachhen	1,000	1	75	• Maya Foundation • Pilachhen Reconstruction and Tourism Promotion Project
Thecho	10,080	1	700	• Lumanti • Nepal Red Cross • Home Net

4

Urban reconstruction in the Kathmandu Valley: five case study settlements

Data from all the case study settlements support that the emergency response immediately following the earthquakes was relatively fast and efficient. This occurred within the first three months after the earthquakes and focused on emergency medical attention, the provision of food and water and setting up temporary shelters, examples of which are still in use as of 2017, as seen in Figures 4a–d. This work was done by a combination of national and local government, volunteers, NGOs and international humanitarian actors. We encountered few substantial complaints about these aid efforts. This was in part because of the urgency of the initial response, the spontaneous engagement of a wide assortment of actors, and the finite nature of the emergency period. During this phase, households and communities organised small-scale efforts to clear debris, brace damaged structures and restore basic functioning to damaged areas. Examples of the status of the settlements during the course of our fieldwork are presented in Figures 5a–c. For the most part, we found that this was still the state of affairs in all of the case study areas 20 months after the earthquakes.

Allocation of housing grants was contingent upon the completion of the official damage assessment carried out by Nepal's Central Bureau of Statistics with support from the United Nations Office of Project Services. The phase of the assessment that included the Kathmandu Valley and our case study settlements did not start until April 2016 (one year after the earthquakes) and was completed in June 2016. This delayed the drafting of lists of official beneficiaries and the disbursement of housing grants by at least a year in all settlements. At the time of writing this paper (September 2017), the majority of households listed as 'beneficiaries' had either claimed the first tranche of funding or had secured access to it (the government having deposited funds in the beneficiary's name, which they can claim later). Many residents in these settlements are eligible for their second instalment, but funding has not been disbursed because NRA engineers have not provided a formal assessment to the NRA central office about the safety and integrity of housing plans.

As elaborated upon in another paper (Daly *et al.*, 2017), the NRA played a very limited role in the case study settlements. When evaluated according to their main tasks, we found that the NRA did not carry out many of its assigned functions with regard to rebuilding housing in urban neighbourhoods, as outlined in Table 4. Furthermore, it seems likely that the NRA significantly delayed and complicated rebuilding by assuming

Figure 4. Examples of temporary shelters.

4a: Sankhu.

4b: Thecho.

4c: Bungmati.

4d: Sankhu. Photos by Patrick Daly

Figure 5.

5a: Demolished building with rubble piled up, Pilachhen.

5b: Cross braces in Patan.

5c: Piles of recycled bricks and building materials in Pilachhen. Photos by Patrick Daly

Table 4. Overview assessment of the 'key roles' the NRA has played in case study settlements, from interviews with local stakeholders in each settlement

SETTLEMENT	ALLOCATION OF RECONSTRUCTION FUNDS (HOUSING GRANT)	COLLABORATION WITH KEY STAKEHOLDERS	BUILDING IMPLEMENTATION CAPACITY	MONITORING AND QUALITY CONTROL	ACCOUNTABILITY AND TRANSPARENCY
Bungmati	1st instalment: paid 2nd instalment: some 3rd instalment: none	Collaboration led by UN–Habitat Moderate NRA involvement	No NRA support for building capacity	Monitoring officer sent for initial visit by NRA No sustained follow-up	No public hearing Grievances of local residents collected in initial stage, in collaboration with local ward office and members of citizen ward council
Harisiddhi	1st instalment: paid 2nd instalment: some 3rd instalment: none	No NRA collaboration	No NRA support for building capacity	Initial NRA visit No evidence of sustained NRA involvement	No public hearing No grievance collection
Machhegaun	Lumanti to pay US$ 3,000 towards houses it builds	No adequate NRA collaboration with NGO (Lumanti) and community reconstruction committee	No NRA support for building capacity	Monitoring officer sent for initial visit by NRA No sustained follow-up	No public hearing Grievance collection through one-page form placed in local ward office
Pilachhen	1st instalment: paid 2nd instalment: some 3rd instalment: none	Informal NRA collaboration Main collaboration led by national NGO (Maya Foundation)	No NRA support for building capacity	Monitoring officer sent for initial visit by NRA No sustained follow-up	No public hearing No grievance collection
Thecho	Lumanti to pay US$ 3,000 towards houses it builds	Collaboration led by national NGO (Lumanti) National Reconstruction Authority (NRA) role very limited	No NRA support for building capacity	Monitoring officer sent for initial visit by NRA No monitoring or quality control by NRA engineers since then	No public hearing or grievance collection as stated in the rebuilding guidelines

Source: Daly *et al.*, 2017

roles that it did not carry out. Our interpretation of this lack of effectiveness is that the structure of the NRA did not align with or incorporate municipal and ward officials (who are needed to carry out many of the pragmatic tasks required in urban reconstruction and who are in close proximity to affected neighbourhoods) and informal governance structures. We found that in response to the vacuum created by the NRA, residents in all five case study settlements formed local organisations to coordinate rebuilding – which we refer to here as community reconstruction committees (CRCs).

In three of our case study settlements, CRCs were formed through the initiative of local stakeholders, largely a small group of influential residents. Bungmati formed the Bungmati Area Reconstruction and Development Council (BARDC); Pilachhen formed the Pilachhen Reconstruction and Tourism Promotion Project (PRTPP); and Harisiddhi formed the Harisiddhi Reconstruction and Rehabilitation Committee (HRRC). These CRCs have taken on the role of leading local reconstruction, with varying degrees of success and failure, as discussed in more detail below. In the other two case study settlements, Machhegaun and Thecho, a Nepali NGO, Lumanti,[7] helped form CRCs to oversee rebuilding.

4.1 Bungmati

In Bungmati, a total of 580 houses were completely destroyed by the 2015 earthquakes. Given its central location and the presence of well-known heritage sites, Bungmati was the focus of extensive attention after the earthquakes. Initial community efforts to clear debris and shore up structures was followed by a number of high-profile initiatives to rebuild and revitalise the settlement. Immediately after the earthquakes, locally formed groups initiated relief and rescue operations. In coordination with the District Administration Office, local groups were able to mobilise a security force to carry out relief and rescue operations. Around the same time, a student group from Kathmandu University provided support. As the relief and recovery phase subsided, a Danish volunteer group with a history of attachment to Bungmati dating back nearly seven decades was instrumental in building more than 200 temporary shelters made from cement boards (for walls) and tin roofs. More than 100 families continue to live in the temporary shelters that are scattered in different locations around the central Bungmati area (as of June 2017).

Following the immediate relief period, on the advice of the local ward office, local leaders in Bungmati formed the Bungmati Area Reconstruction and Development Council (BARDC) to prepare a long-term rebuilding plan. The committee comprised approximately 20 members, representing local youth clubs, the *guthi* and different neighbourhood associations in Bungmati – with members serving two-year terms and nominated by community consensus. The key stakeholders critical to the governance of reconstruction in Bungmati are the local ward office, the local-level representative of the Lalitpur (or Patan) Metropolitan City Office, UN–Habitat, BARDC, the RC, which is the NRA's reconstruction unit, the Embassy of Sri Lanka, the Department of Archaeology (DoA) of the government of Nepal and Prera–Thegim–Tulsi–J.V.

In a high-profile collaboration with UN–Habitat, BARDC developed a comprehensive plan framed around the restoration of traditional Newari heritage and promoting tourism. The Bungmati reconstruction plan, titled Revitalising Bungmati: An Action Plan, was a highly touted model of how to rebuild historic urban settlements as part of a community-based development initiative. The action plan is a sophisticated effort that draws upon the resources of local and international actors. Detailed plans were made for physical reconstruction, with a strong emphasis on capitalising upon cultural heritage to support a mixed development of residential and commercial properties, the former of which would largely cater to the tourist industry. The action plan is full of renderings of how the new buildings would look – mainly using traditional Newari aesthetics, coupled with modern engineering and construction techniques to ensure the structures are seismic resistant, as seen in the building plans shown in Figure 6. These plans anticipated the integration of social and economic development in the post-disaster reconstruction. Hundreds of pages of reports were produced containing detailed blueprints for rebuilding, the result of significant collaborative effort between various stakeholders.

While the project had lots of exposure and high-profile endorsement, there was no clear plan to fund the reconstruction. The cost of rebuilding homes far exceeded the US$ 3,000 cap on aid for housing set by the GoN, and the external partners limited their involvement to planning. When discussing the situation with the BARDC, people were uncertain as to how to proceed, and some were surprised that more funding was not made available given Bungmati's high profile and the list of external partners. As of June 2017, little

[7] Lumanti has a long history of working on issues related to urban poverty and housing, and had projects in both settlements before the earthquakes. Lumanti's plan in both settlements is to "*facilitate and assist earthquake-affected families and communities to plan and rebuild hopes, homes and basic infrastructure, making communities better, safer, resilient and sustainable for a dignified life of the people.*" http://lumanti.org.np/program/details/reconstruction-programs.html

Figure 6. Poster of rebuilding plan posted in Bungmati showing the structures to be rebuilt.

Photo by Patrick Daly.

progress had been made in implementing the plan. According to the reconstruction plan developed by the BARDC in collaboration with UN–Habitat, the reconstruction of houses will take place once the temple reconstruction is complete and the building by-law for Bungmati is drafted and passed through the cabinet, as elaborated in Box 3. The plan for reconstruction is now in place, but there is uncertainty about where the funds to finance the plan will come from. The mandate to subscribe to Newari design has limited the options available to residents, preventing them from building dwellings in non-traditional styles. A small number of individual residents have begun rebuilding through contractors, using their own resources and generally adhering to the Newari design proposed in the rebuilding plan.

Bungmati was seemingly well-positioned to rebuild. It is a prominent location, has great potential as a tourist and pilgrimage site, contains important national symbols and attracted the involvement of major international agencies. Significant efforts were made to draft plans for a comprehensive reconstruction, in consultation with a wide range of local stakeholders. However, the commitment shown by external stakeholders to making plans was not matched with needed financial support. The ambitious rebuilding plans ended up being too elaborate and expensive to be carried out by most residents, and were predicated upon a collective effort. The high-profile process raised local expectations but then failed to deliver. The end result is stagnation and limited locally driven efforts to rebuild private houses.

BOX 3. REBUILDING HERITAGE

While house reconstruction has been slow, more progress has been made in rebuilding ritual and communal structures. One example of a successful initiative is the reconstruction of the Machhendra Bahal temple, which is Bungmati's main heritage site and a key driver of tourism. The restoration is a joint effort by the Embassy of Sri Lanka, who are the primary donors, and the GoN Department of Archaeology. The reconstruction project was contracted out to a construction company, but has been beset by various conflicts and issues. Bungmati residents, including some members of the Bungmati Area Reconstruction and Development Council (BARDC), initially voiced concern about the lack of local participation in the decision-making processes related to the temple's design and reconstruction. Local participation was limited to manual labour. However, the reconstruction of Machhendra Bahal, while slow and at times contentious, has generated energy and hope among locals – that after the temple is reconstructed, it will bring back tourists and provide a boost to the ailing local economic and social life.

4.2 Harisiddhi

The earthquakes destroyed more than 550 houses in Harisiddhi and 24 people were killed. A locally formed ad hoc group of volunteers helped with relief and rescue work. A social group with a long history of organising in Harisiddhi, called Group 36, was at the centre of most relief work that took place there in the aftermath of the earthquakes. Some of the members of Group 36 are influential local figures who have access to the local ward office. Having these channels in place helped locals mobilise government resources in conducting relief. After the relief period, a well-known social worker with political contacts helped form a reconstruction committee (Harisiddhi Reconstruction and Rehabilitation Committee – HRRC) to plan for rebuilding. The committee consists of local poltical leaders, senior residents, representatives of the *guthi* and professionals with relevant expertise (ie architects and engineers). The reconstruction committee is not a formally registered body.

After the earthquakes, a neighbouring traditional settlement called Khokana attracted the interest of the Indian Embassy to fund heritage-related reconstruction work. Following this, an ex-mayor of Patan and an ex-Harisiddhi resident, who is a relatively well-known civil society leader, organised the community to rebuild following a similar plan to Khokana, with the hope that the Indian Embassy would provide funding. The plan was prepared with the involvement of local engineers and architects in Harisiddhi. The reconstruction proposal aimed to rebuild communal infrastructure and private residences using traditional Newari architecture modified to be earthquake resistant, and to enhance commercial potential through homestays and tourist facilities. The plan was prepared by a committee of around 20 local engineers, with input from a series of community meetings open to all landowning residents. The HRRC does not have any internal mechanisms to fund rebuilding – its plan is predicated upon securing external funds from undetermined sources (once it became clear that the Indian Embassy was not going to fund the project).

To date, the plan has not been implemented because of a lack of funds. This lack of funds, or for that matter the absence of any potential funders, comes as no surprise to many residents of Harisiddihi as they feel the rebuilding plan was overly ambitious and somewhat unrealistic. In addition, the lack of land titles has limited individual rebuilding, as they are necessary to obtain loans from formal financial institutions. There are two kinds of families without titles. The first have historically owned land in the absence of formal titles; in such cases, ownership has been informally passed down through generations. The second are joint families. The household head, normally the father, remains the sole owner of property. The sons live separately from the parents, or the father / mother, but have yet to formally transfer property rights from the parents / father / mother to the sons. In Harisiddhi, as in other urban neighbourhoods, the lack of land title continues to be a major impediment because it is mandatory to present the title at the municipal office and obtain approval of the house design before starting to rebuild.

As such, as of June 2017, approximately 30 households out of the more than 100 who lost their homes have started rebuilding on their own without following the community plan. These individual initiatives, which are funded by residents who topped up the first tranche of NRA funding with their own resources, largely lack permits and are not based upon traditional Newari design.

While lacking the high-profile involvement seen in Bungmati, the general rebuilding plan in Harisiddhi focuses on the same general themes. The CRC chose to focus on a comprehensive rebuilding plan framed around restoring heritage and encouraging economic development through tourism. In Harisiddhi, an impressive amount of local resources were mobilised to draft the rebuilding plan. However, as in Bungmati, securing funding to carry out their elaborate plans has been elusive, leading residents to slowly give up a collective approach and to strategise how to rebuild at an individual level. Excellent plans, in the absence of political support and adequate resources, contributed more towards disappointment than rebuilding – and it is arguable that the delays caused by the planning process, and futile attempts to raise funding, have set back rebuilding efforts considerably.

4.3 Pilachhen

Nearly 100 houses were destroyed in Pilachhen. Approximately 90 per cent of these were made out of brick and mud – a feature of most of the old traditional settlements in the city, Newari or non-Newari. Rubble clearance took place through locally formed volunteer groups. Nearly 100 families were displaced because of the earthquakes, however, if one includes tenants, the figure increases significantly because Pilachhen is a mixed residential and commercial area with a significant number of small business owners. There is no official record of the number or status of renter families affected by the earthquakes – a major problem throughout all earthquake-affected urban areas.

The Maya Foundation, an NGO run by a wealthy local businessman, proposed a plan based on leveraging cultural heritage to promote livelihoods through tourism. The Pilachhen Reconstruction and Tourism Promotion Project (PRTPP) was formed to oversee the implementation of the rebuilding plan depicted in Figure 7. Reconstruction efforts are coordinated by a council of influential local figures who serve as

Figure 7. Poster of rebuilding plan posted in Pilachhen showing the vision of heritage conservation and tourism targeted by the Maya Foundation and the Pilachhen Reconstruction and Tourism Promotion Project.

Photo by Patrick Daly.

advisors, with the chairman of the Maya Foundation playing a central role. None of these members are elected, but community meetings have been held to obtain the consensus of residents for the plan, which aims to rebuild up to 100 houses and some communal infrastructure.

While efforts are loosely coordinated with ward and municipal offices, all operational aspects of the project are driven by the PRTPP and the Maya Foundation. This includes hiring an engineering company to design plans and build, and a financial structure through which homeowners contribute 25 per cent of the cost in cash and 25 per cent in labour. The Maya Foundation is working to secure the remaining 50 per cent through subsidised loans and donor support.

The social capital of the Maya Foundation director has provided PRTPP with access to a host of potential donors, who have been providing financial and material support to the rebuilding of Pilachhen. The rebuilding received its first major boost from a donation of US$ 370,000 from a private trust; and brick factories in the city donated nearly 100,000 traditional bricks for reconstruction (different factories continue to donate bricks from time to time). Fifteen houses are now complete. An additional 25 houses are under construction. The total budget proposed for rebuilding in Pilachhen is US$ five million, of which close to US$ one million is allocated for rebuilding public structures such as temples and public squares. Following initial progress in Pilachhen, the NRA has touted the settlement as a model for rebuilding historic settlements, and has promised to facilitate rebuilding by expediting building permits and being flexible about the US$ 3,000 cap – in effect by cutting through red tape it created in the first place.

Pilachhen has been more successful than the previous two settlements in terms of rebuilding. We feel the main difference is that a consortium of influential and respected locals, led by a motivated and affluent person, have drafted feasible plans, secured community buy-in and have gone to extraordinary efforts regarding implementation. In particular, the Maya Foundation has focused on practical steps to secure the resources

needed to rebuild, and mobilised the 'sweat equity' of local residents.

4.4 Machhegaun

In Machhegaun, a total of 386 houses were destroyed by the earthquakes, the majority of which were made of brick, mud, tiles and tin sheets. Unlike the settlements described above, Machhegaun lies further from the city core and has fewer open spaces and heritage sites. Therefore, the rebuilding costs for Machhegaun are not as high as for Pilachhen or Harisiddhi as there are not many public structures to rebuild. Initial relief and rescue work was conducted mostly through local efforts with some help from the Nepali NGO, Lumanti, and the local ward office.

Rebuilding in Machhegaun is led by Lumanti. As part of Lumanti's efforts to make the rebuilding community driven, a local users' committee was formed with 15 members. Unlike in Harisiddhi or Pilachhen, however, reconstruction in Machhegaun is driven more by the aspirations of individual homeowners rather than a collective approach to preserve Newari heritage. Shelter took precedence over other needs. With the support of the Community Architect Networks of the Asian Coalition of Housing Rights, Lumanti has guided the community to develop a master plan. According to this plan, 115 houses have been selected for rebuilding from the list of beneficiaries provided by the NRA. Each house costs a minimum of US$ 20,000 to build, and each household receives a housing grant of US$ 3,000 from Lumanti, in three instalments. This support replaces the grant that was to be originally provided by the NRA. Residents need to obtain the balance of funding on their own, and so priority was given to households that were able to obtain the necessary financing – rather than those who had a greater need. As of June 2017, more than 35 houses were under construction, of which 15 are nearing completion. The plan is to finish by February 2018.

4.5 Thecho

Thecho is an old Newari settlement on the outskirts of the core of the Kathmandu Valley. It is rich in cultural heritage and has abundant religious and traditional structures such as community centres, temples and public squares. The majority of houses in Thecho are traditionally built using bricks, mud, tiles and tin sheets. A survey conducted by the government after the earthquakes identified 715 houses in Thecho as having been completely destroyed, including all cultural and religious structures. The 715 houses represent about 25 per cent of all households in Thecho. The initial relief and rescue efforts were conducted by local youth groups with strong links to national political parties, and these links were instrumental in channelling financial and technical resources necessary for conducting rescue efforts in Thecho. NGOs such as Lumanti and Home–Net were also instrumental in providing relief support, most of which was channelled through the ward office. In addition, all the households identified as earthquake victims in the initial survey received government support through the local ward office in two instalments – about US$ 100 initially, to purchase goods to meet basic needs, and then about US$ 150, to buy warm clothes for the following winter.

As in Machhegaun, Lumanti encouraged already existing neighbourhood committees to form a community-led reconstruction committee. This led to the formation of a users' committee, under which there were a number of sub-committees each responsible for overseeing different aspects of rebuilding, such as management of debris or resolution of land disputes. At the initial stage, Lumanti conducted a 'community mapping' programme, an important part of which was to produce a more accurate list of victims, or beneficiaries, than that initially produced by the government survey. They also instituted a community land-pooling programme so that the new plans would conform to the new building by-laws. After the community mapping, the intial list of 712 households was reduced to 520, which reflects more accurately the extent of destruction according to Lumanti. Following this, Lumanti selected 115 houses for reconstruction. As in Thecho, the principle of 'shelter first' (not 'heritage', as in the case of other Newari settlements) guided the reconstruction plan. As of June 2017, 50 were under construction, more than 10 were being designed and 15 had been completed.

In both Machhegaun and Thecho, rebuilding efforts were well-supported by Lumanti. Both plans focused on residential construction in the most effective and safe manner possible, and did not include more ambitious redevelopment plans centred around revitalising cultural heritage and tourism. Lumanti's approach has been practical and results oriented. They worked with both communities to pool land and modify the design of the settlements, and then proceeded with construction funded mainly by local resources.

5 Discussion

In all five case study settlements, residents either established community reconstruction committees or partnered with an NGO, to organise local rebuilding plans. The CRCs have prepared elaborate plans for rebuilding their communities, for which in some cases they were able to mobilise financial and technical support from external parties, such as donors, UN–Habitat, educational institutions, local NGOs and the private sector. While each plan is unique to the specific settlement, they share an overall general vision of utilising a comprehensive, integrated community development plan that emphasises physical, social and economic development; participatory and inclusive frameworks; special provisions for members of marginalised groups (such as poor households, widows, etc); hazard mitigation features; and the promotion and preservation of cultural heritage. In Bungmati, Harisiddhi, and Pilachhen, part of the core of these proposals was to capitalise upon Newari cultural heritage, the beauty of traditional architectural styles and the potential of tourism to generate sustainable livelihoods.

All of the proposals we have reviewed generally align with the principles promoted by the GoN master plan and the general consensus promoted by international organisations for community-based reconstruction efforts for 'building back better'. We were impressed by the effort that has been put in by CRCs to ensure that reconstruction plans represent the vast majority of community members, with specific efforts taken to ensure the participation and input from potentially marginalised groups of people. However, none of the plans adequately factor in the rights and needs of non-landowners. Acknowledging that the GoN will not provide full funding for the reconstruction of urban settlements, the CRCs have proposed a variety of different strategies to rebuild. While these vary in the details among the five settlements, the proposals generally request government funding for municipal infrastructure, to provide technical support for the construction/ restoration of heritage facades,[8] and full reconstruction of a limited number of houses for the most economically disadvantaged residents of each settlement. The vast bulk of the funding needed to rebuild is expected to come from a combination of donors, household savings, private sector investment and loans. The CRCs are lobbying the government and banks to provide low-interest financing for reconstruction initiatives that are specific to earthquake-affected communities. However, the settlements that have made the most progress rebuilding houses have secured some funding commitment from a local NGO or other local stakeholders. Neither funding from international donors nor the NRA housing grants has contributed significantly to rebuilding.

Our analysis of rebuilding in the case study areas confirms the challenges of rebuilding urban areas in Nepal and suggests that much of the delay has been the result of a combination of poorly conceived policies (or lack thereof) for rebuilding urban settlements; limited capacity of the NRA and national-level authorities to impact on-the-ground progress; and the distractions

[8] To ensure the seismic safety of reconstructed buildings, the proposals we have reviewed present architectural plans in which the core structure of the buildings are steel-reinforced concrete, built to modern safety regulations and standards. To preserve the aesthetic of the Newari traditional settlements, residents propose constructing exterior facades that are stylistically based upon traditional Newari architecture. From their perspective, this provides increased resilience of urban areas while preserving the unique charm and ambience that has long defined Newari settlements. We have noted, perhaps cynically, that the CRC emphasis on preserving cultural heritage seems to be driven more by the potential economic advantages of cultural tourism and the potential appeal that 'preserving cultural heritage' may have to sympathetic donors.

and raised expectations caused by the interventions of external stakeholders that were not able to commit financial resources for implementation. Below, we list a number of key issues we encountered that need to be better addressed in post-disaster rebuilding of urban environments.

Lack of coherent policy for urban rebuilding

The NRA has provided little or no practical rebuilding guidance or assistance in our case study settlements, other than allotting the first tranche of the housing grants (which took a long time to arrive). Their slow formulation and dissemination of macro-level policy, and the failure to establish district implemention units and local resource centres to support local rebuilding, has meant that key governance functions were not effectively carried out. Local government officials from the municipal and ward levels have been left in an awkward position, as they lack the capacity and resources to deal with their core functions and are uncertain about the roles they should be playing. We find that the failure of the NRA to work with and empower muncipalities and wards has been a major strategic mistake and has led to significant delays, while failing to utilise existing government officials and infrastructure. Formal governance structures have made relatively small contributions to rebuilding houses in urban areas – and it can be argued that these have impeded rebuilding. The lack of policy has limited the effectiveness of international humanitarian and development actors, as they were left waiting for specific guidance for how best to shape their interventions to support the GoN's efforts.

Conflicting governance structures

We found that within GoN governing structures, there is a lack of both clarity and functional capacity, both of which are negatively influencing reconstruction. We encountered confusion among all categories of stakeholders about who has jurisdiction for reconstruction-related tasks and decisions. This is in part because the administrative structure of the NRA does not align with that of the GoN or the proposed governance structure laid out in Nepal's pre-2015 disaster management framework. At a practical level, we found that uncertainty about lines of authority and jurisdiction within both the GoN and the NRA has resulted in significant delays and indecision. International NGOs and donors have told us that this has left them confused about who their appropriate Nepali counterparts should be. Many of the practical administrative tasks essential for rebuilding new structures, such as safety inspections and issuing building permits, are still within the mandates of municipal and ward government offices. No significant steps have been taken to increase the capacity of these institutions to deal with the increased complexity and quantity of the workload caused by the reconstruction – and the GoN did not enlist the support of external actors to help reinforce local government offices. In short, within the ward and municipal offices in earthquake-affected areas, there is a clear lack of personnel and skills to address the unique challenges of rebuilding. Currently, there is no GoN programme to reinforce offices under pressure by providing extra staff.

Delays in providing building codes and by-laws

The failure of the GoN and the NRA to produce clear and timely by-laws and building codes has led to a significant delay in reconstruction. Furthermore, some of the government's new building by-laws make it virtually impossible to rebuild historic settlements and do not respect the housing needs and cultural attachments of residents. Requirements about building height, minimum plot size, spacing between buildings and width of streets do not align with traditional styles, layouts and patterns of land ownership in the Newari settlements. In one village, we were present during a meeting between the community and an official from the Kathmandu Valley Authority, which oversees land zoning in the region. After an hour of carefully talking the official through the reconstruction plans, and a tour of the settlement, the official told them that it all sounded good. He said he appreciated their efforts to preserve their cultural heritage but they had to change everything in accordance with the new government by-laws (which had not yet been made publically available). This left the CRC and their partner NGO uncertain about how to proceed next.

Lack of working mechanisms for engaging local stakeholders

Somewhat surprisingly, given the enormous effort that went into preparing the proposals, CRCs in several settlements asked us to recommend whom they should give their proposals to. Proposals were written by local stakeholders with the encouragement of an ad hoc assortment of external stakeholders, but without any formal call for such proposals by the GoN. Interviews with both CRCs and government officials suggest there is a lack of formal mechanisms for incorporating local initiatives within the broader disaster governance framework – in spite of the NRA's plan acknowledging the need for local involvement.

Funding availability and limits

While the government has recently adjusted the cap on aid per household, it generally does not allow for any combination of government and donor support to exceed US$ 3,000 per household. As this falls far short of the amount needed to rebuild in urban settlements, this means that even if CRCs find willing donors, it is not easy for them to accept the amounts required. The confusion about funding limits per household has most likely caused external actors to focus more on rural areas than urban ones. In part, this is because many international humanitarian actors prefer, for a range of practical, logistical and philosophical reasons, to approach reconstruction from a holistic community perspective. It is easier to oversee an integrated reconstruction that merges physical rebuilding with social and economic development when an organisation can focus on entire communities or neighbourhoods. The NRA policy of asking international actors to work from the GoN beneficiary list and to limit the financial contribution for each household prevents integrating sustainable developing into reconstruction plans. Interestingly, in Pilachhen, we found that local leaders have been able to mobilise their social and political capital to bend the rules and obtain approval from the government to begin reconstruction using a combination of funding that exceeds the cap. This is an area for future continued research. While there have been rumours that various forms of low-interest financing will be made available for reconstruction, this has yet to materialise in a significant way for most of the urban areas.

The complexity and heritage value of affected urban settlements and their housing stock

As discussed in this report, the modern formal housing stock in Nepal was not as severely affected by the earthquakes as the traditional housing stock of the historic Newari settlements in the Kathmandu Valley. The heritage value of these small towns has been widely recognised for decades but was no impediment to the poor maintenance of their housing stock. Over their lifespan, many traditional houses were subdivided and altered in ways that enhanced their vulnerability. Poor maintenance was further compounded by the fact that significant numbers of these houses were rented out to low-income renters, while their owners moved to modern houses or apartments on the urban fringes.

While the earthquakes have severely damaged these traditional urban settlements, they have also revived awareness about conserving heritage neighbourhoods. This is not only considered fundamental to preserving the Newar's lifestyle, culture and intangible heritage but also for the important role of tourism in their livelihoods. The desire to rebuild their settlements in line with the Newari traditional building culture is clearly reflected in the reconstruction or master plans developed by the community-based reconstruction committees, with or without the support of external agencies, in Bungmati, Harisiddhi and Pilachhen. However, only in Pilachhen was the plan also linked to an implementation project and to a housing finance mechanism that allowed the reconstruction of houses to begin.

High percentage of renters living in damaged houses and no policy to accommodate tenants

In all of the above discussion about community-based initiatives, it is important to note that they mainly involve property owners. There are no support mechanisms within the urban areas to deal with the large numbers of renters who were affected by the earthquakes. This large, and potentially highly vulnerable, category of stakeholders has been left to fend for themselves and has not been eligible to receive any aid for rebuilding. They have also not been provided with support for relocating. Given the usually high numbers of renters in urban areas, a formal policy for supporting non-owners should have been developed. While this has been recognised by international actors, they are constrained by GoN policies and traditional practices with regard to formal land ownership.

Piecemeal reconstruction

As progress to rebuild in an integrated and comprehensive manner has been stalled by the above-mentioned issues, households in some of the settlements have simply started rebuilding on their own. These smaller-scale efforts are the result of wealthier individuals who do not require external funding, or poorer families who are pooling resources and labour to slowly rebuild. Figures 8a–d show a range of examples. While we are encouraged to see local people showing such initiative, these efforts are problematic for several reasons. First, the piecemeal reconstruction could potentially limit the realisation of integrated community redevelopment plans and prevent

the construction of a cohesive aesthetic, which might undermine efforts to preserve cultural heritage and promote sustainable cultural tourism. Second, in the case of poorer residents, it is possible that they will use neither appropriate materials for reconstruction nor seismic-resistant approaches. This could rebuild vulnerability into these historic settlements, which can be dangerous both to residents and their neighbours. Third, residents who rebuild using their own resources may lose their eligibility to receive financial assistance from the government or donors in the future. This is a major reason why many people are still waiting, as they do not want to miss out on potential funding if the GoN eventually comes through. Finally, the legality of these new structures is questionable. Technically, most people who started rebuilding on their own have not been authorised to rebuild. This means that their houses cannot be formally resold at a later date and cannot be used as collateral to secure financing. In addition, it raises the possibility that the government could force them to demolish these structures, which has already been threatened in some of the settlements (although we have found that some respondents don't feel the government will actually go through with such demolitions).

Figure 8. 8a, 8b, 8c, 8d: Examples of local rebuilding initiatives in Patan. (Photos by Patrick Daly)

8a

8b

8c

8d

The context of national-level politics

While the issues that we have discussed in this section remain crucial to understanding the state of post-earthquake reconstruction in Nepal in general, and in urban Nepal in particular, it is important to recognise the reconstruction is affected by the broader political and economic context in Nepal. The NRA is caught between the unstable nature of Nepali politics on the one hand and donors' conditions linked to reconstruction aid on the other. Any changes within the government, common given the transient nature of politics and coalition formation among national political parties, leads to inevitable changes in both the NRA governance structure and its ability to function. The leadership and the executive committee membership of the NRA have changed multiple times in response to wider political shifts. Furthermore, it remains to be seen what effect the recently held local elections and the upcoming provincial- and federal-level elections will have on the reconstruction. We were told by local ward officials that the amalgamation of different wards prior to the local elections six months ago forced ward offices to reorganise household-level data, which has stalled the distribution of housing grants, including approving application for building permits. In addition, the current CEO of the NRA recently declared his candidacy at the upcoming provincial-level elections, leaving the position vacant and, in the process, inviting yet another round of uncertainty within the NRA. Furthermore, reconstruction aid from different donor agencies, including loans, appears to be earmarked for rebuilding public infrastructure, such as schools, health centres and heritage sites, but not housing.[9] Together, these political and economic conditions have stalled or slowed the rebuilding of private houses in the Kathmandu Valley.

[9] https://thehimalayantimes.com/business/national-reconstruction-authority-start-mobilising-indian-line-of-credit/

6

Conclusions and recommendations

Our research on the reconstruction of urban settlements in the Kathmandu Valley has made it clear that the lack of progress, especially with regard to rebuilding housing stock, is deeply rooted in the conceptual approach to reconstruction adopted by the GoN. Efforts were made from the onset of the reconstruction period to frame rebuilding around widely embraced humanitarian ideals such as fair and equal distribution of resources, support for marginalised groups, the reduction of physical and economic vulnerabilities and inclusive participatory decision-making. However, our research shows, at least within the urban areas of the Kathmandu Valley, that the rigid application of the government's approach has actually been detrimental to rebuilding and is undermining well-thought-out grassroots initiatives. While there are legitimate concerns about the disproportionate allocation of resources, or biasing of aid efforts towards particular groups of people, the Nepal example raises serious questions about whether denying communities the right to solicit external funding to rebuild is in standing with these humanitarian principles.

Our research findings lead us to several preliminary recommendations that could both help in the continued reconstruction in Nepal and be of relevance to the reconstruction of urban areas in other post-disaster situations.

1. While it is important to promote humanitarian ideals, governments and donors need to retain sufficient flexibility to rebuild in highly diverse urban contexts. A 'one size fits all' approach is not suitable. Policies should support bottom-up initiatives by communities, especially those who demonstrate creative, comprehensive solutions that are grounded in sustainable development and show a deep understanding of local societies and communities. Particular to Nepal, allowing CRCs to solicit external funding without arbitrary caps would most likely result in better reconstruction outcomes in some areas, without taking potential resources away from other areas.
2. When establishing a national reconstruction agency to deal with a specific disaster, it is essential for it to be aligned with pre-disaster governance structures, to harness the potential of local government offices that have a more intimate understanding of communities, and to have good working relations with both international donors and national stakeholders. The international community should have worked closely with the GoN to ensure that suitable working relationships were factored into the structure of the NRA. In the case of Nepal, it is highly questionable whether the establishment of the NRA significantly aided the reconstruction efforts.
3. Within urban areas, municipal and local governments manage most of the practical tasks dealing with land zoning and building approvals. These basic tasks can become significant bottlenecks when workloads are dramatically scaled up in a post-disaster situation. Special attention needs to be given at the onset of a major urban disaster to reinforce the ground-level bureaucracy that oversees these important yet often overlooked tasks. In the case of Nepal, one possible solution is to second civil servants from non-disaster

affected areas to deal with this increased workload. In addition, the international humanitarian sector could support efforts to reinforce local government offices with technical, financial and administrative support. Donor-supported administrative support teams, composed of a combination of Nepali and international personnel, could be usefully 'surged' into heavily affected areas, anticipating the need to carry out inspections, administer funding and process paperwork such as land titles, building permits, etc.

4. We find that many stakeholders do not expect the government and/or donors to fully fund the reconstruction of their communities. However, their lack of access to low-interest financing is a major impediment. Providing this type of financing would be an obvious step to facilitate the reconstruction of urban areas in Nepal. International donors, through mechanisms such as bilateral loans and trust funds, could have played a much stronger role in making low-interest financing available and supporting the private banking and capital markets in Nepal to deal with the demand by households and businesses for loans to rebuild.
5. The major complaint we encountered from most stakeholders was the lack of clarity about how to proceed. It is absolutely essential that governments provide clear flows of information about the availability of potential funding, changes in building codes and by-laws, and the various steps in the reconstruction process. We feel that people in Nepal are just as disenfranchised by the lack of reliable information as by the lack of financial assistance.
6. From the start of the reconstruction, the combined GoN, NRA and international humanitarian actors have promoted a wide range of what have turned out to be unrealistic rebuilding plans. It is important to balance the ideals of 'building back better' with the practical realities of what is feasible on the ground. We encountered numerous examples of reconstruction plans that were highly ambitious but ultimately were not successful because resources were often in shorter supply than rhetoric and plans. This well-intentioned overreach set the stage for unmet expectations and resultant disappointment, framed urban rebuilding largely as a failure, diminished the credibility of the GoN, the NRA and external aid actors, and meant affected persons delayed starting their own initiatives while they waited for help from external stakeholders that never fully realised. It is vital for all agencies involved to present affected communities with realistic reconstruction plans from the onset of a disaster.

This report has shown that while reconstruction in Nepal is generally progressing slowly, it appears to be particularly challenging in urban areas. In spite of their multiple advantages over rural areas, such as accessibility, the presence of well-organised and committed communities and highly educated community leaders committed to the reconstruction of their neighbourhoods, housing reconstruction in urban areas has barely started more than two years after the earthquakes.

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The Urban Reconstruction in Nepal Project is a research initiative to investigate aid governance, community-driven reconstruction initiatives and the rebuilding of historic urban settlements damaged by the 2015 earthquakes in the Kathmandu Valley, Nepal. This research was motivated by the lack of reconstruction progress in urban settlements one year after the earthquakes, and was carried out in conjunction with the Housing Recovery and Reconstruction Platform–Nepal and the Earth Observatory of Singapore. We conducted ethnographic fieldwork in five urban settlements over a period of 18 months. Our research shows that the delay in urban reconstruction was a function of the lack of a clear and well-supported policy for urban reconstruction; limited governance capacity and neglect by municipal- and ward-level officials; financial restrictions caused by the funding cap per family to rebuild their homes; and the lack of a framework to support local community-driven rebuilding initiatives.

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