URBAN
PREPAREDNESS

Lessons from the Kathmandu Valley

Acknowledgements

Executive summary

Kathmandu is one of the fastest growing cities in South Asia, with a population of around 2.5 million people. It is situated on a major fault line, placing it at significant risk of an intense earthquake. Out of 21 cities worldwide that lie in similar seismic zones, Kathmandu is at the highest risk in terms of impact on people. Moreover, rapid, haphazard urban development including non-compliance with the building code, failure to use qualified engineers or trained masons, encroachment of buildings on open space and depletion of the water table is increasing vulnerability at a significant rate. Kathmandu's critical infrastructure and essential services are also extremely vulnerable.

In the event of a major earthquake, the presence of only three access roads into the Kathmandu Valley and lack of heavy equipment to remove rubble will be serious barriers to an effective large-scale response. It is predicted that if an 8.3 magnitude earthquake hit Kathmandu today more than 100,000 people would be killed, 300,000 injured and 1.8 million displaced.

However, an unprecedented multi-stakeholder effort to prepare for such an earthquake is underway. As well as outlining the hazards and deepening vulnerabilities affecting Kathmandu, this report explores that work – focussing on the Nepal Red Cross Society (NRCS) and British Red Cross Earthquake Preparedness for Safer Communities programme (EPS). This programme provides a vital learning opportunity. Urban preparedness has received less attention than response and recovery operations in

evaluations and learning reviews of humanitarian action in urban areas. As part of the British Red Cross Urban Learning Project, this study aims to enhance the understanding within the NRCS, the British Red Cross and our partners in and outside the Red Cross and Red Crescent Movement (hereafter, Movement) of the particular challenges and opportunities of urban preparedness. More specifically, the study focuses on identifying key learning points on community engagement and local and national action in a complex urban disaster management system.

Learning points for the Nepal Red Cross Society and other agencies in the Kathmandu Valley

The study outlines 12 key learning points on urban risk management and preparedness for response in the Kathmandu Valley, to be used by the NRCS and other operational agencies. These learning points address topics affecting all levels of the organisation, from volunteers in the field to senior leaders. They cover actions and processes within the National Society as well as interactions with affected communities and other actors before, during and after a major earthquake.

1. Understanding urban space, land and the built environment: Risk management, preparedness and response planning and operations must be developed to take account of the physical and social differences between and within urban areas and the different risks and opportunities they present. Preparedness and risk

reduction models and approaches cannot be simply transferred from rural programmes.

2. Understanding mobility and its operational implications: Daily and seasonal patterns of mobility to, from and within the city are important to understand as they affect the availability of people for participation in assessments and preparedness activities (with additional implications for the sustainability of those activities), as well as the number of victims, the level of panic and the presence and gender of first responders. The disaster and the response itself will also affect normal mobility, raising complex land rights issues. All this needs to be carefully considered in risk management, preparedness and response planning.

3. Raising the awareness of the population: Urban areas are noisy, with many stimuli and messages competing for people's attention. Given the high-impact but lower day-to-day probability of an earthquake, agencies must co-ordinate their communications and awareness-raising activities to ensure their messages are heard, understood and contribute to sustained behaviour change. Where messages are delivered in person, education levels and gender issues should be considered, and where messages are delivered via mass media, those channels should be selected to ensure maximum impact and that different demographic groups are reached, both now and in the future.

❯ A busy and chaotic street corner in District 27, a high risk area if an earthquake were to strike due to inadequate construction practices and a dense population.

4. Institutional analysis and the importance of 'connectedness' in a complex urban system: Nepal's urban disaster management system is crowded, complex and continually evolving. Knowing in advance where to go to seek guidance, instructions and to coordinate (both for individuals and the NRCS at all levels) is critical. Partners may not be the usual go-to actors; urban disaster management requires engagement with diverse actors such as the NEOC, militaries, Nepal Police and Armed Police Force, fire brigade, utility providers and the private sector. This requires investment of time and resources in institutional analysis and co-ordination, which should be undertaken in a gradual manner, addressing priority sectors and thematic issues in turn.

5. Leadership: Urban disaster management requires trained leaders who are sensitised to the likely needs of their staff and the population at large. Lines of authority and chains of communication must be clear given the complex and evolving nature of the disaster management system in the Kathmandu Valley. Leaders also require the physical means to operate and remain credible in a large-scale urban disaster.

6. The role of technology: Urban areas present exciting opportunities for risk awareness raising and disaster impact and response mapping. It is important both to develop a 'scientific' understanding of risk and vulnerability now and to be ready to harness the transformative potential of technological devices and applications. Crucially, however, at the time of disaster, technology must either be fully mastered or more traditional methods

used. This is critical in the event that information networks and communications systems are down.

7. Ensuring redundancy – preparing to manage operation in a degraded mode: Preparedness and readiness for response to a large-scale urban disaster involves the ability to operate in a degraded mode. Redundancy must be built into the system through fall-back positions in communications, human resources, transportation, logistics and media. This requires a combination of technical investments and training.

8. Local leadership in the first phase response: In the face of limited national response capacities and major logistical challenges likely to delay international humanitarian assistance, local capacity to lead the first phase response will be critical. The focus here should be on limited light search and rescue interventions, first aid, evacuation and linkages to remaining functioning health structures.

9. Domino effects – dealing with sequential crises: Urban areas present a heightened risk of an earthquake triggering other secondary disasters. The potential for an earthquake to trigger fires, chemical contamination, social unrest and mass displacement should be at the heart of all preparedness and response planning.

10. Co-ordination and co-operation in a complex multi-actor response: Effective co-ordination and co-operation is core to an efficient response that draws on the capacities of all actors involved in the urban disaster management system.

For the NRCS, co-ordination and co-operation in the following areas should be prioritised: first aid and triage, blood banks, dead body management and delivery of relief items. Overall, in coordinating the response, the Red Cross must be ready to work with diverse actors from national and international militaries to the Nepali diaspora.

11. Information and communications management: The NRCS is a key node between communities and the multi-sector, multi-agency urban disaster management system. Effective information and communications management will be vital in getting the information required to assess needs and plan the response and get out key messages on search and rescue, first aid and behaviour in the aftermath of the disaster.

12. Being alert and agile: Nobody knows what the exact impact of, and operational constraints imposed by, a large-scale earthquake will be. Therefore the focus of DRM and preparedness efforts should not be on prediction, but on building a state of alertness and agility, in order to respond effectively to a range of scenarios.

Learning points for the British Red Cross Urban Learning Project

As this study is part of the British Red Cross Urban Learning Project, it also features nine learning points for the wider Red Cross and Red Crescent Movement and humanitarian sector. These are intended to guide learning, training, and the embedding of good practice and innovative approaches in current and future programmes. Further detail and supporting

analysis on all the learning points can be found in the main report.

1. Urban space and mobility – Implications for assessment, preparedness and response: Risk management, preparedness planning and response management must be developed to take account of the 1) physical and social differences between and within urban areas and 2) peoples' movements to, from and within urban areas. These factors create different risks, vulnerabilities and opportunities with attendant implications for assessment, preparedness and response planning. The risks, vulnerabilities and capacities of communities can only be effectively understood through high-quality assessments that use secondary and technological sources to supplement participatory methodologies, while also taking account of change over time.

2. Understanding the urban population: Understanding the political, socio-economic and cultural characteristics of the urban community you are working with is essential to effective programming. This will have important implications for how preparedness, awareness raising and training activities are organised. Similarly, a detailed and nuanced understanding of the power dynamics, leadership and decision-making processes in the community is vital to maximising the reach and impact of risk management and preparedness activities.

3. Identifying and mapping critical infrastructure and services: One of the features of urban areas with a high level of exposure to disasters is that part or all of their critical infrastructure can be destroyed with the onset of a disaster event. As part of urban preparedness, it is important to keep an up-to-date map of infrastructure and their distances to Red Cross or Red Crescent branches. Strategic development of the area should therefore incorporate the need for redundancy, for example in health, water and communications systems, within core urban planning objectives.

4. Institutional analysis in complex urban systems: A clear understanding of roles and responsibilities is particularly important given the complexity of urban disaster management systems. Urban disaster management requires engagement with diverse actors such as national disaster management agencies, militaries, emergency services and the private sector. This requires investment of time and resources in institutional analysis.

5. Multi-scenario planning: A number of variables, including location, time, season and political and institutional context, will significantly affect the impact of a large-scale urban disaster and the challenges and opportunities presented by the response. Multi-scenario planning is, therefore, essential. This should involve a collective, participatory and cross-organisational process, which aims to build a state of alertness and adaptability in order for the National Society to respond to whatever the disaster may throw at them.

6. Using new technologies: The proliferation of new technologies and the potential for private sector partnerships in urban areas is leading to new opportunities for disaster risk management, needs assessment, co-ordination, monitoring and evaluation and relief assistance. It is important to remain both fully connected to the emerging possibilities of new technologies, but also to continue to build a capacity to maintain operations without them.

7. Leadership: Large-scale urban disasters lead to tense, complex and uncertain situations where the rapid insertion of strong leadership is essential, both at the national and local levels. Training is not the only requirement to fulfil the responsibility of leadership. Equally important are the basic equipment necessary to remain operational and credible, as well as resources to ensure that staff and volunteers and properly cared for.

8. Building readiness for co-ordination and co-operation is essential to an effective response that draws on the capacities of all actors involved in the urban disaster management system. This requires clear responsibilities for relationship management within the National Society, including co-ordination with actors such as the military and the diaspora.

9. Getting the communication right is essential to urban response given the rapidity of information flows and the potential for rumour and panic to create secondary disasters. A clear communication strategy should be in place as a preparedness measure, whilst mechanisms should be in place to ensure effective information gathering, verification and communication on the situation, where to go and how to get assistance.

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