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EDITORIAL: URBANISATION AND DISASTER RISKS IN THE HIMALAYA

Dilli P. Poudel[1*], Anushiya Shrestha[1], Dil Khatri[1], Jonathan Ensor[2]

ABSTRACT

Haphazard urban expansion and poorly planned infrastructure development have increased and intensified disaster risks in the geologically fragile Himalaya. Against this backdrop, consolidating and interpreting the findings from four articles included in this special issue on "urbanisation and disaster risk in the Himalaya", this paper analyses the interrelation between urbanisation and disaster risk in rapidly urbanising areas of Nepal Himalaya. The key findings that we pull together from the papers are: (1) large-scale construction activities, including the real estate boom in peri-urban Nepal, increasingly delink traditional communities from their land and culture; (2) disconnected policies and contradicting implementation in the informal to formal transitions have sustained informality and deepened risk in urban Nepal; (3) institutional inertia sustains poor coordination between stakeholders in relation to knowledge sharing, technology and resources which hinder proactive disaster management at the community level; and (4) operational and knowledge gaps emerge from failures to delineate authority, responsibility and accountability between concerned institutions, and weak institutional capacity between agencies, impeding the adoption of early warning and action system in Nepal. Based on these findings, we conclude that while the political restructuring and decentralisation of the local governments have provided authorities with the legitimacy to devise disaster management policies, enhancing overall institutional capability in terms of access to and mobilisation of knowledge, technologies and resources is needed to reduce disaster risks in the Himalaya.

Keywords: early-warning and action; haphazard urbanisation; Himalayan disaster; institutional limit; neoliberal urbanism; urban informality

[1] Southasia Institute of Advanced Studies (SIAS), Nepal
[2] University of York (UoY) and Stockholmn Environment Institute (SEI), UK
*Corresponding email: dilli.poudel@hotmail.com

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1. INTRODUCTION

The Himalaya is *always* in a process of geomorphological changes with active geology and dynamic geography (Panday, 1984; Rusk et al., 2022; Wymann Von Dach et al., 2017). Studies, however, suggest that the recent anthropogenic interventions in the Himalaya driven by rapid but haphazard urbanisation and uncontrolled constructional activities (Gurung, 2021; Kargel et al., 2016; Rimal et al., 2020) have overlooked "mountain specificities" i.e. inaccessibility, fragility, marginality and heterogeneity (see Jodha, 1992; Wymann Von Dach et al., 2017; Anbalagan, 1993). The fragile geophysical conditions coupled with haphazardly growing urbanisation and rampant construction activities in mountain geography have triggered multi-hazards[3] (e.g., landslide, flood) and simultaneously elevated exposure of the Himalayan dwellers to the risk of disasters (Tiwari et al., 2018; Walker, 2011; Wester et al., 2019; Poudel et al., 2021; Rusk et al., 2022) which are likely to intensify in the future (Mesta et al., 2022; Wester et al., 2019). In the Nepal Himalaya, an average of 500 natural and non-natural hazards occur annually which on an average kill 900 and affect around 6,40,000 people every year (NPC, 2019).

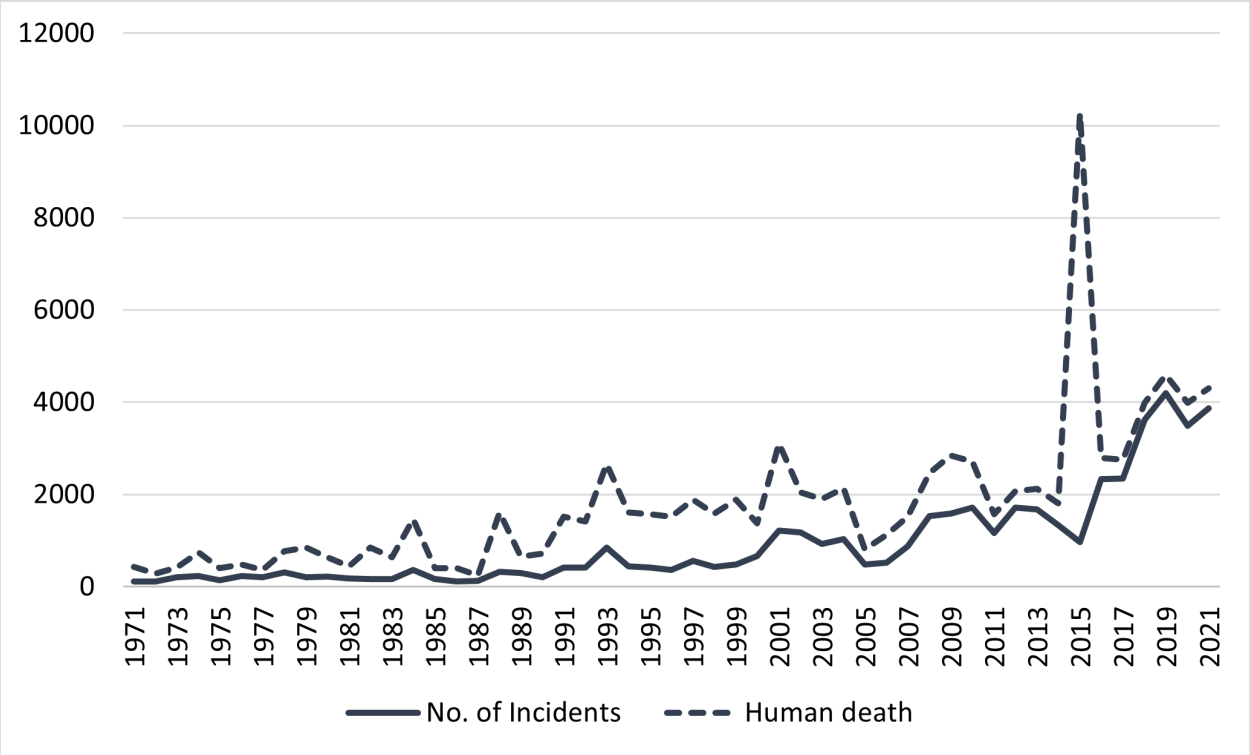


Figure 1: Disaster events and casualties in Nepal Himalaya
(Sources BIPAD portal (bipadportal.gov.np/) and UNDRR DesInventar (www.desinventar.net/)
Note: No. of incidents includes both natural and non-natural hazards

Of the total 240 million inhabitants of the Himalayan countries (also called Hindu Kush region), around 30 - 50% of the total population live in urban centres (Singh et al., 2019; Wester et al., 2019), and the urbanisation is growing (UNDESA, 2014; Wester et al., 2019). In Nepal, contributed

[3] According to UNDRR, the term multi-hazard, which includes biological, environmental, geological, hydrometeorological and technological processes and phenomena, refers (1) the selection of multiple major hazards that the country faces, and (2) the specific contexts where hazardous events may occur simultaneously, cascadingly or cumulatively over time, and taking into account the potential interrelated effects (www.undrr.org/terminology/hazard). It poses a range of additional challenges due to the differing characteristics of processes, and the goal of multi-hazard assessment is to reduce the risk of disasters (Kappes et al., 2012).

primarily by the rural to urban migration, urban population increased at an annual average of about six percent between 1970s and 2013 (Gabriela, 2013). The recent staggering increase in the urban population of the country from 17% in 2013 to 40% in 2014/15, and to 66% in 2021 is (see figure 2), however, also driven by the politico-administrative restructuring after the federalism in 2008 and designating rural areas as municipalities[4] (Timsina et al., 2020; Ishtiaque et al., 2017). With rapid urbanisation, the informal population living in slums and riverbanks have also substantially increased during the last two decades (Sengupta, 2011; K.C. and Pahari, 2011; Shrestha et al., 2021, Shrestha et al., 2020). And expanding is the spectrum of risk that impact everyday lives in urban Nepal (Ruszczyk, 2018). The rapid growth in urban population in tandem with growing urban slum dwellers and multi-hazard risk demand study on the nuances of urban disasters in the region.

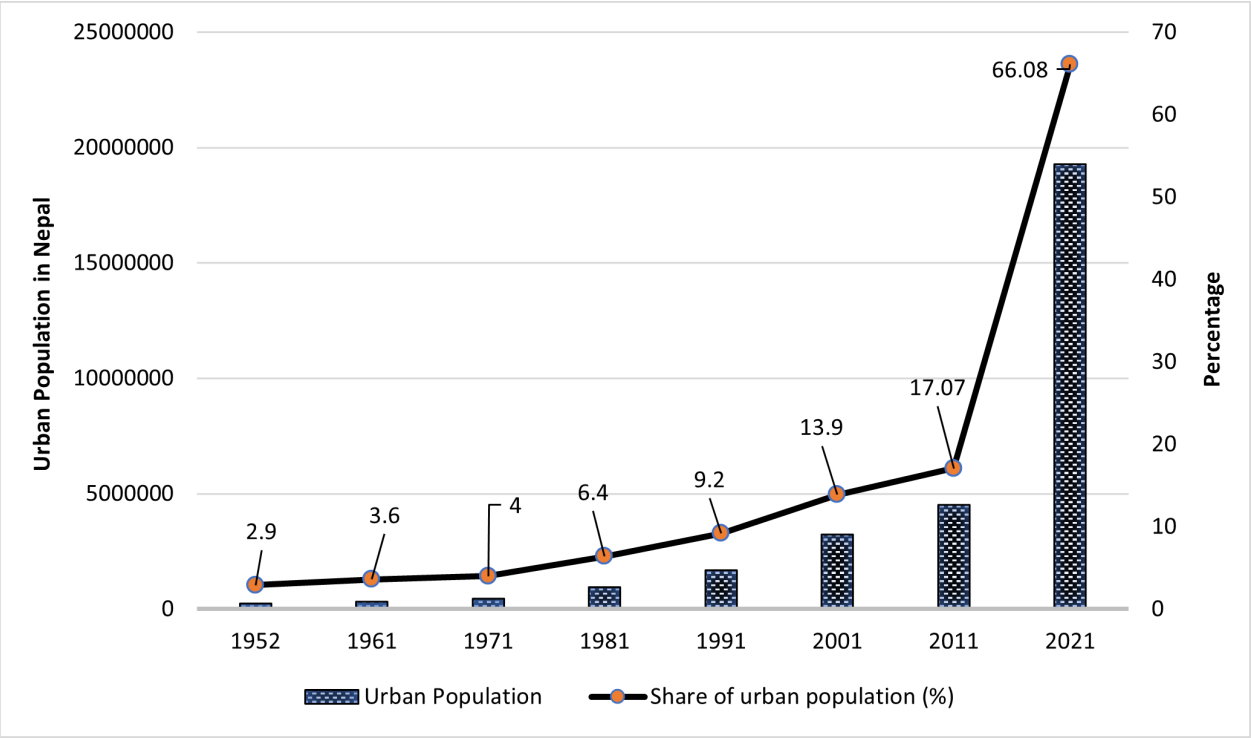


Figure 2: Urbanisation trend in Nepal (Source: Central Bureau of Statistics (CBS), (cbs.gov.np)

Many of the recent urban governance initiatives and infrastructure development activities (led by both governmental and non-governmental organisations) in Nepal have increasingly prioritised improved disaster management in devising and implementing projects, plans, policies (Poudel and Blackburn, 2020). However, not all urban dwellers have received equal attention, leaving some more vulnerable than others (Bhattarai and Conway, 2010; Mesta et al., 2022). Given the nature of Himalayan people's exposure to multi-hazard risks, understanding diverse experiences and perceptions of risks, root causes of risks (biophysical, socio-technical and political-institutional), and the underlying narratives that inform differential responses and abilities to deal with and reduce such risks are crucial. Such scrutiny can help in embracing a wider perspective on risk, and enhancing the risk management abilities, including those of marginalised dwellers and

[4] In Nepal, municipalities are considered as urban areas. Presently, Nepal has 293 municipalities, including six metropolitan and 11 sub-metropolitan cities (https://www.mofaga.gov.np/).

their representatives, thereby setting the ground for more equitable and resilient cities (Matin et al., 2018; Ruszczyk, 2018). Furthermore, such nuanced interpretations help to expose how risk management institutions and actors interact, and how urban governance assemblages explicitly or implicitly prioritise development activities in multi-hazards contexts. Exploring local risks, urban dwellers' needs, narratives, institutions, and practices will therefore, not only be an instrument to co-produce knowledge on multi-hazard risk but also inform related stakeholders to adopt innovative policy solutions to address existing and avert potential hazards and disasters in the future.

Urban governance, particularly in the newly declared urban areas, frequently lack institutional capacity, illustrated by a lack of authority, knowledge and access to resources (Khatri et al., 2022), particularly in relation to the disaster preparedness, exposing dwellers to multi-hazard risks (Aryal, 2014). Additionally, the exposure to multi-hazard risk and effects of disasters on residents vary based on class, caste/ethnicity, gender which is co-shaped by social stigma and uneven capabilities to access and influence the disaster management policies and praxis in the country. Understanding disaster risk and social vulnerability can, therefore, be a pragmatic entry point to foresee safer future cities. Against this backdrop, through this special issue entitled "Urbanisation and Disaster Risks in the Himalaya", we try to understand how haphazard urbanisation increases disaster risk in the Himalaya. Specifically, we consolidate knowledge on urbanisation and urban policies affecting formal and informal populations of urban core and peripheries, the extent to which local institutions can deal with local hazards, exploring 'institutional limits', and the importance of early warning system to reduce disaster risk. The analysis and debates in this issue will help improve our understanding on the interlinked processes that generate risks, differentiate experiences of risks and risk reduction strategies, contribute to enhancing knowledge on disaster governance, and help diverse stakeholders - particularly state actors - to undertake necessary steps to plan for and reduce the risks experienced in present and future cities.

This special issue compiles four empirically grounded and theoretically informed papers. In the first paper, Timsina et al. analyse the political economy of urban change in Kathmandu Valley (KV). Specifically, authors examine the contradictions and contestations brought by the centrally planned development and constructional projects as a part of urbanisation process in Khokana, a suburb located in the southern part of Lalitpur Metropolitan City (LMC) in KV. The massive flow of capital and labour in the 1990s and during and after the Maoist emergency (1996-2006) framed an enabling environment for the capital investment in land, housing and real estate which accelerated the conversion of productive agricultural land into built up areas in KV, particularly in the periurban areas such as Khokana. Consequently, the rapid urbanisation densifies the core cities and increases an uncontrolled urban sprawl of unplanned growth of built-up areas in the periphery, which authors categorise as 'haphazard urbanisation'. The real estate boom induced many periurban farmers to sell their land, alienating them from agricultural activities. In Khokana, central government's initiation of implementing several large-scale projects such as the Fast Track and Outer Ring Roads, electricity transmission lines, and the Bagmati Corridor and

Smart City development with little or no community voices, has generated significant community dissatisfaction. These phenomena of urban change have brought tension and contradictions in the communities in various forms, including protests against the public spaces captured by the powerful individuals, companies, and the infrastructure development project implemented by the central government. Consequently, several community members consider themselves alienated from their land, tradition, and culture. Authors analyse such urbanisation as a product of neoliberal urbanism because they were driven by the forces of market and capital and the liberal policies adopted by the country after the 1990s, which facilitated investors to buy a huge chunk of land for other land use purposes. Although the political economy of urban change has shifted urbanisation from core to periphery, many issues identified by the local community remain unresolved. Thus, in the contexts of state restructuring and urbanising Nepali rural societies, the Khokana case provides an important avenue to rethink urbanisation policies to achieve inclusive future cities.

In the second paper, Shrestha et al. unfold the paradox of prolonged urban informality issues and associated debates in Nepal based on the analyses of urban informality-related formal policies, literature, and media publications. The paper demonstrates that although there have been progressive and paradigmatic shifts in government policies in addressing urban informality issues, policies issued by different government authorities are disconnected. The government dominantly frames informal settlers as the "encroachers" and legalisation defines their settlement as a risk. Hence, formal practices often contradict apparently progressive policies, creating ambiguity and, paradoxically, generating new risks (of eviction) for the informal settlers in urban settings. The authors argue that such (dis)connections between policies and practices and contradictions within policies stimulate the settlers to seek political protection - sustaining informality in Nepal amid the rhetorical priority for informal to formal transition. In these contexts, the authors suggest that the initiatives to seek a permanent solution to proliferating urban informality should prevent institutional inconsistencies and build on the co-learning processes that enable the perceptions and ambitions of all the stakeholders, including the informal settlers- to be explored, understood and reconciled. It is equally important that such initiatives should also pay attention to the underlying social, economic, and political factors that interlink and sustain informality.

The third paper, Ojha et al. drawing on the case of a landslide at Dhamilikuwa village of Rainas Municipality (Lamjung district) and advancing the concept of 'institutional limit', examines the extent to which local institutions can deliver adaptation outcomes in terms of providing responses to the climate-induced disasters. The authors show the limits of existing public and community institutions to addressing climate-related risks and the vulnerability of people to disaster risks. As the case study showed, the scale and the nature of risk posed by the landslide, which was triggered by a river flood but also linked to a number of social and environmental factors, was beyond the capacity of the local community and affected households to handle. While the affected households struggled to adapt to the landslides, institutions operating at three levels – community, village and the district – delivered too little to reduce and manage the landslide risk and its impacts.

What is particularly worrying is that despite radical politics of inclusion and democracy spurred by the civil war in Nepal, the institutional responses were extremely limited for the people in the lower strata of the social structure. The authors identified at least four limits of local institutions: a) inertia created by the social norms and structure embedded in the existing institutions; b) redundancy wherein conventional formal and informal institutions are less relevant to tackle the new challenges posed by climate change; c) fragmentation of institutional efforts involving poor horizontal and vertical coordination among organisations; and d) accountability lapses rooted in the wider political system. This case study reporting institutional limit comes in stark contrast to the high level of expectation from the newly instituted local governments (municipalities) to manage disaster risks. The authors argue that the notion of 'institutional limit' can enhance our understanding of what institutions can (or cannot) deliver for effective local response to urban disaster. These findings have major implications for the optimism placed on the role and capacity of local institutions to adapt to climate-induced disaster risks.

Taking into account increasing frequency and severity of risk in urbanising Nepal, in the last paper, Bhandari et al. discuss the importance of forecast-based anticipatory approaches for effective disaster preparedness and responses and reflect on the challenges to shift the disaster management approach in Nepal from post-event rescue and relief to forecast-based approaches and actions. Their observations, arguments, and reflections are based on the review of literature on international practices and approaches to Forecast-based early Action (FbA) and Forecast-based Financing (FbF), analysis of the national policy documents, and insights from their professional engagements in community-centred flood early warning systems in Nepal and other countries. The authors point to the lack of proper delineation of authority, responsibility and accountability between different levels of the governments and lack of adequate institutional capacity, including the socio-technological knowledge and operational gaps between agencies as the major barriers to proactive early actions. These challenges, they argue, can be overcome through pragmatic legal provisions, technical guidelines, and protocols to clarify the roles, responsibilities, and strong political will, institutional commitment, accountability of the authorities and better understanding of the community. The authors conclude breaking down existing silos between different disaster management agencies and creating enabling institutional environment to adopt advanced forecast-based technologies is the key to improving disaster preparedness and responses and achieving the targets of the National Disaster Risk Reduction Strategic Action Plan (2018-2030).

2. CONCLUSION AND POLICY RECOMMENDATION

This special issue analysed disaster risk production and management in the context of rapid urbanisation in the Himalayan region. In doing so, our intention was to understand and reflect on the interrelations between current urbanisation and disaster management trends with a focus on the Nepal Himalaya. The four cases in this collection exemplify how rapid and unregulated urbanisation is exposing communities, infrastructure, development, and society to multitude of risks.

The cases are social phenomena specific to time and place (Ragin, 1992) so their selection is *inherently particular* in terms of society, place and their importance to the community (Burawoy, 1991). All studied cases *consistently* and *explicitly* document *the existence of a lack of coordination* (in terms of sharing knowledge, capacity and resources) among governing institutions of urbanisation and disaster risk management which in turn exacerbate multi-hazard risks. The first case study unpacks the lack of political commitment, institutional capacity and coordination reinforced under the rubric of neoliberal urban policy, thus the state-led interventions continue to accelerate rather than control haphazard urbanisation. Such unplanned, haphazard and capitalist urbanisation has been termed "a disaster waiting to happen" (Madden, 2021). The lack of commitment, capacity and coordination is further evidenced in the second case study which takes a closer look at the paradox of prolonged urban informality issues in Nepal. This study uncovers the political and policy entanglements of informal to formal transitioning, which work to undermine efforts at resolving urban informality issues (see also Sharp, 2022; Banks et al., 2019).

In line with Allen's (2006) warnings that treating community-based institutions as a panacea to disaster management can be problematic, the third paper points to the limits of local risk governance in the contexts of entrenched social norms and structures, and poor institutional capacity, coordination and accountability. Finally, the fourth case study further substantiates that the operational gaps between agencies and the lack of institutional capacity and proper delineation of authority, responsibility and accountability between different levels of the governments are the major barriers to proactive implementation of early warning actions in Nepal which undoubtedly increase the vulnerability to future disasters.

Although the establishment of the federal structure has opened a way to devolve authority to local governments, studies have highlighted there is a lack of institutional capability to undertake the roles entrusted to them (Khatri et al., 2022). Consequently, the governing institutions at multiple scales lack the ability to regulate haphazard urbanisation and associated risk production. By analysing the cases included in this special issue, we conclude that while political restructuring and decentralised local governance have improved authority to devise policies and actions, enhancing overall institutional capability remains a crucial and unmet need. This needs clarity in distribution of authority across different levels of governments and robust mechanisms for sharing knowledge, technology, and other resources, which, subsequently, will help enhance institutional capacity to understand local risks and prepare for and respond to multi-hazard disaster risks interfacing haphazard urbanisation.

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