Developing an urban poor-centred hazard impact categorisation: an application to the Kathmandu Valley, Nepal

[Abstract EGU25-17659] Harriet E. Thompson[1,5], Faith E. Taylor[1], Bruce D. Malamud[2], Joel C. Gill[3], Robert Šakić Trogrlić[4], and Melanie J. Duncan[5]

A. SUMMARY

- We developed a systematic compilation of **urban poor-centred hazard impacts** from **multiple data sources**, with application to the **Kathmandu Valley, Nepal**.
- Sources: **disaster databases**, **newspaper articles**, and **stakeholder engagement**.
- Synthesis of the exemplars into an **urban poor-centred hazard impact categorisation** (*Table 1*).
- Value of **multiple lines of evidence** in capturing a more **comprehensive** insight of **impact** on **marginalised groups**.

B. METHODOLOGY

- **Compilation** of **urban poor-centred hazard impact exemplars** focused on **earthquake, flood, landslide** and **urban fire** events.
- **Boolean searches** in **DesInventar Sendai** and the **Nepal DRR Portal** (disaster databases), and **Nexis archive** (newspaper articles).
- **Three focus groups** with **residents** of **informal settlements** (*Figure 1*), **co-facilitated** with a **local NGO** (Nepal Mahila Ekata Samaj) and **11 interviews** with **practitioner stakeholders**.
- **Synthesis** of the **exemplars** using an **iterative systematic review approach** to produce the **urban poor-centred hazard impact classification.**

Figure 1 Photos of the Bansighat informal settlement looking west over the Bagmati River (top) and inside the community centre where two of the focus groups were held (bottom).

C. RESULTS

- **45 exemplars** from **disaster databases** focusing on **quantitative tangible impacts**.
- **83 exemplars** from **newspaper articles** including **quotes** from affected individuals.
- **Rich insights** from focus group and interview participants in sharing **lived experience** and **detailed exemplars** of **impact.**
- Stakeholder engagement **supported disaggregation** of **impacts** by **social groups** within **urban poor communities.**
- *Table 1* summarises the **urban poor-centred hazard impact classification.**
- *Figure 2* illustrates two examples of **interactions** of **hazard impacts** to form **cascades.**

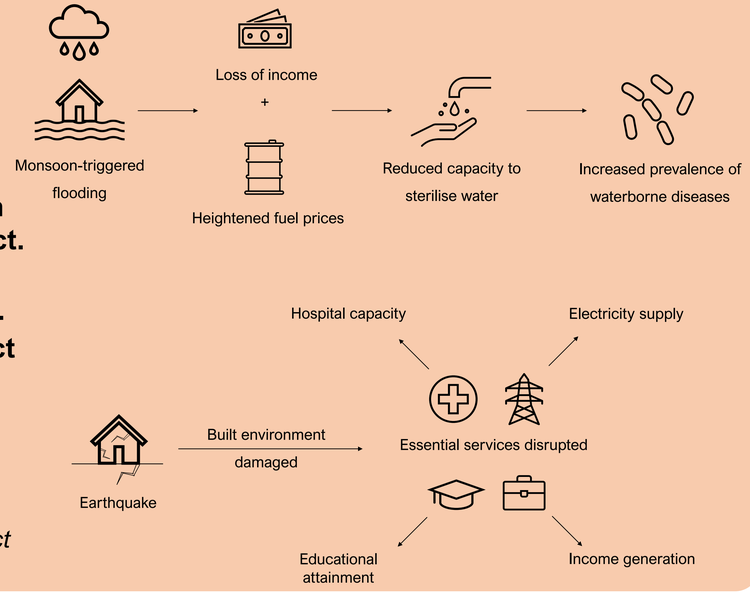

Figure 2 Illustration of two examples of urban poor-centred impact cascades in the context of the Kathmandu Valley, Nepal.

Table 1 Urban poor-centred hazard impact classification showing impact category and type.

Impact category	Impact type
Access to services	Electricity supply disruption
	Loss of "development gains"
	Missed education
	Reduced hospital capacity
	Reduced quality of hygiene and sanitation
	Reduced quality of water supply
Built and natural environment	Damage to informal settlement infrastructure
	Environmental degradation
	Formal infrastructure damaged
	Informal settlement homes damaged/destroyed
	Reduced ease of mobility
	Relocated or displaced
Cultural and religious heritage	Access to religious and spiritual support
	Damage to/destruction of cultural and religious sites
Employment and savings	Leave from/loss of employment
	Reduction/loss of income
	Reliance on borrowing money or use of savings
Health and wellbeing	Death by suicide
	Fatality
	Household and community conflict
	Increased prevalence of disease
	Injury
	Mental distress
	People missing
	Physical health symptoms
	Pregnant and lactating women's health concerns
	Risk of sexual harassment and assault (violence)
	Women's health concerns
Possessions	Damage to/loss of belongings (school and household items)
	Damage to/loss of documents
	Damage to/loss of food and fuel supply
	Lost cattle or animals

D. IMPLICATIONS

- Supplementing **semi-quantitative data source types** with **qualitative data collection** evidences a more **holistic understanding** of **urban poor-centred impact** in **data-scarce regions**.
- The **developed classification builds upon** the depth and breadth of **existing categorisations** with **additional impact types** and **indicators.**
  - For instance, existing databases miss the specifics of **women's health concerns** which, **evidenced** by our **classification**, should be **split** into **specific measurable components**.
- The **contribution** of the **classification** is rooted in the **methodology** used to compile and synthesise the exemplars, use of **blended data sources**, and the **locally derived approach**.

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