Strengthening Nepal's Security Sector for Effective Crisis Management

Dr. Lekhnath Khanal[1*], Debika Aryal[2]

[1] Post-Doctoral Fellow, Srinivas University, Mangalore, India
[2] Researcher, Nepal Philosophical Research Center, Kathmandu

** Corresponding Author1 Email: lekhanathkhanal@hotmail.com*

Article History
Received:
07-07-2025

Reviewed & Revised:
09 -08-2025

Accepted:
25-08-2025

Abstract

This study examines how Nepal's security sector can be strengthened for effectively crisis management. Guided by an interpretivist research philosophy, a qualitative research approach with qualitative descriptive research design was employed, using quota sampling to select fifteen participants - five each from the Nepal Army, Nepal Police, and Armed Police Force - and fifteen documents for secondary analysis. Primary data were collected through semi-structured interviews, complemented by the analysis of secondary documents, including reports and prior studies. Thematic analysis was conducted simultaneously on both primary and secondary data to identify key patterns and insights. Findings indicate that Nepal's security sector can be strengthened for crisis management through collaboration with local authorities, community participation, mental health and psychological support for security personnel, integration of technological advancement, and ensuring gender inclusivity. Recommendations include institutionalizing joint exercises, integrating communities, strengthening technological capacity, providing mental health services, and operationalizing gender-inclusive measures.

Keywords: Crisis management, Security sector, Nepal, Strengthening, Interpretivism

Introduction

Nepal is a nation that stands as a beautiful but challenging landscape, where the risk of natural disasters is a constant part of life. Its unique position in the mighty Himalayas makes it extremely vulnerable to a wide range of serious natural hazards. The country frequently experiences devastating earthquakes, destructive landslides, and widespread flooding that can wipe out entire communities (Adhikari, Devkota, & Wu,

2021; Manyena, 2016). These natural dangers are often made difficult by other man-made problems, such as periods of political uncertainty and the potential for tensions along its borders. This combination of natural and human-made threats creates a very complex and difficult environment for managing large-scale emergencies. The massive 2015 earthquake was a tragic example of this vulnerability, causing immense loss of life and property. That disaster also clearly showed the world that Nepal's security forces - which include the Nepal Army, the Nepal Police, and the Armed Police Force (APF) - are absolutely essential front-line responders. They play the most critical role in immediate life-saving operations, such as searching for survivors in rubble, providing first aid, and maintaining order when chaos strikes (Ojha, Regmi, & Herat, 2018). They are the first line of defence when crisis hits.

Despite the bravery and dedication shown by these security personnel, there are still many deep-rooted problems that stop Nepal's crisis management from being as effective as it needs to be. A significant issue is the lack of clear and efficient communication between the different security agencies themselves. When the Army, Police, and APF cannot share information quickly and clearly, it leads to confusion, wasted effort, and a slower response to people in desperate need of help (Sharma, 2020; Khanal, 2017).

Furthermore, Nepal's big political shift to a federal system has created a new challenge. While this change gave local governments more power and responsibility for handling disasters in their own areas, it has also made coordination with the national-level security agencies much more complicated and often confusing (Asian Development Bank [ADB], 2020). Nobody is entirely sure who is in charge of what during the chaotic first hours of an emergency.

Other major gaps include training that does not fully prepare personnel for specific crises like medical disasters or cyber-attacks (Malla, 2021), a lack of strong teamwork with civilian relief organizations (Koirala, Dhakal, & Maharjan, 2018), and a serious neglect of the psychological trauma that security workers experience, as well as a failure to address the unique dangers that women and girls face during disasters (Khan, Wagatsuma, & Watanabe, 2022; Magar & Khanal, 2020).

The aim of this study is to analyze the key strategic improvements required to enhance the crisis management capabilities of Nepal's security sector. Specifically, this research will explore how to foster greater collaboration with local authorities within Nepal's federal governance structure; integrate community participation and leverage local knowledge to improve response accuracy and efficiency; utilize technological advancements such as drones and satellite imagery to strengthen situational awareness and operational coordination; address the mental health needs of security personnel to safeguard their well-being and operational readiness; and ensure gender inclusivity in crisis response by developing protocols that meet the specific needs of women and girls during emergencies. This study answers the question of "How can Nepal's security sector improve its crisis management strategies by fostering greater collaboration with local authorities, integrating community participation, and utilizing technological advancements, while addressing the mental health needs of personnel and ensuring gender inclusivity?"

By examining these interconnected dimensions, this study seeks to provide a holistic and actionable framework for strengthening the overall resilience and effectiveness of Nepal's security forces in crisis situations. The significance of these findings lies in their potential to directly inform policy-making, strategic planning, and training curricula within Nepal's security institutions.

Literature review

Theoretical review

Effective crisis management is understood through models that break down the process into manageable phases. The most widely cited model is the four-phase cycle: mitigation, preparedness, response, and recovery (Lindell & Perry, 2004; Alexander, 2002). *Mitigation* involves long-term steps to reduce the impact of disasters, such as building codes. *Preparedness* focuses on planning, training, and exercises to get ready for a crisis. The *response* phase is the immediate reaction to an event to save lives and property. Finally, *recovery* involves rebuilding communities and restoring normalcy. This cyclical model provides a structured way to analyze the strengths and weaknesses of any crisis management system.

For the security sector, which includes the military, police, and other forces, effective crisis management is also guided by principles of good Security Sector Governance (SSG). SSG emphasizes that security institutions must be effective, accountable, and operate under democratic civilian control (Sedra, 2016). This means they must be efficient in their response but also transparent and respectful of human rights, especially during the chaos of an emergency. In a crisis, this translates to the need for clear legal frameworks, inter-agency coordination, and collaboration with civilian authorities (Hanggi, 2004).

Furthermore, the concept of resilience has become central to modern crisis theory. Resilience moves beyond just responding to a disaster and focuses on a system's ability to absorb shocks, adapt, and transform to withstand future crises (Manyena, 2016).

Global and regional practices

Effective crisis management necessitates a security sector that is collaborative, technologically advanced, and human-centric. Globally, best practices emphasize decentralized governance that strengthens partnerships between national security bodies and local authorities. Local governments, recognized as vital first responders in the Sendai Framework, offer irreplaceable contextual knowledge of their regions (United Nations Office for Disaster Risk Reduction, 2015). Adopting structured systems like the Incident Command System (ICS) helps standardize response efforts, integrating multiple agencies under a unified command to improve coordination (Buck, Trainor, & Aguirre, 2006). However, effective decentralization requires sustained investment in local capabilities and financial mechanisms to empower municipalities (Heijmans, 2021; Dixit, 2022).

Integrating community participation magnifies the effectiveness of formal security operations. Local populations provide critical intelligence on geography, social dynamics, and tradi-

tional survival practices, forming the basis of Community-Based Disaster Risk Management (CB-DRM) (Mercer et al., 2010). Programmes like Bangladesh's Cyclone Preparedness Programme demonstrate how trained volunteers bridge gaps between official agencies and vulnerable communities, significantly reducing fatalities through localized early warnings (Paul, 2009; Twigg, 2023). This collaborative approach builds social capital and improves trust in public institutions.

Technology plays a transformative role in modern crisis response. Drones and satellite imagery enhance situational awareness, damage assessment, and logistics. Satellite networks like the International Charter 'Space and Major Disasters' enable rapid large-scale analysis, while drones deliver real-time data for precise operations such as search and rescue (Parker, 2020). However, these tools must be deployed within ethical frameworks addressing privacy and local autonomy to avoid technological dependency (Sandvik & Lohne, 2014; UNISDR, 2015).

The well-being of security personnel is crucial for sustained operational readiness. High-stress environments contribute to psychological conditions such as PTSD and burnout (Brooks et al., 2020). Organizations must prioritize mental health through proactive measures like peer-support programs, resilience training, and access to psychological services, adopting models such as Psychological First Aid (World Health Organization, 2013).

Gender inclusivity is essential for equitable and effective crisis response. Women and girls face heightened risks during disasters, including gender-based violence and resource exclusion (IASC, 2015). Security strategies must use sex-disaggregated data and include women in leadership roles. Practical measures like safe spaces, dignity kits, and gender-sensitive sanitation facilities are critical to meeting differentiated needs (Enarson, 2012).

Previous studies on Nepal's security sector and disaster response

Nepal, situated in a seismically active region with complex topography, is highly vulnerable to a multitude of natural disasters, including earthquakes, floods, and landslides. The devastating 2015 Gorkha earthquake served as a critical juncture, exposing both the capacities and limitations of the nation's disaster response apparatus and triggering a strategic revaluation (Government of Nepal, 2015). The security sector—comprising the Nepal Army, Nepal Police, and Armed Police Force (APF)—is mandated as a primary responder in crises, responsible for search and rescue, maintaining law and order, and facilitating humanitarian assistance. This literature review synthesizes existing research on the role of Nepal's security sector in crisis management, examining its documented strengths, identified weaknesses, and the ongoing discourse on necessary reforms for enhanced effectiveness.

In terms of strengths, a consistent theme in the literature is the commendable rapid mobilization and dedication of Nepal's security forces during major crises. Multiple studies highlight their pivotal role in the immediate aftermath of the 2015 earthquake. Ojha, et al. (2018) document the swift deployment of security personnel for search and rescue operations in collapsed structures, often under extremely hazardous conditions. Their presence was also crucial in preventing looting and managing crowd control at distribution sites, thereby maintaining a degree of social order amidst the chaos. Furthermore, Maharjan (2019) emphasizes the technical contributions

of specialized units, particularly the Nepal Army's engineering corps, in clearing critical road access routes and debris, which was essential for enabling the flow of aid to affected communities.

Despite these strengths, a significant body of research identifies systemic weaknesses that hinder optimal response. A primary critique centres on inter-agency coordination and communication. Sharma (2020) notes that a lack of integrated communication systems and unified protocols often leads to confusion, duplicated efforts, or critical gaps during emergencies. This problem is intensified by what Khanal (2017) identifies as an absence of standardized reporting and information sharing structures between the Nepal Army, Nepal Police, and Armed Police Force. This prevents the establishment of a common operational picture and impedes the efficient allocation of resources.

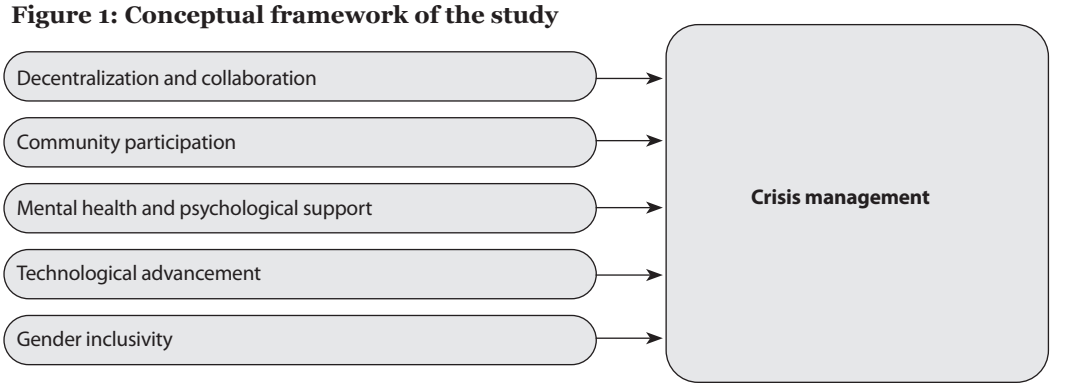
A second critical weakness is the need for more specialized and diverse training. Although institutions like the Institute of Crisis Management Studies (ICMS) provide advanced programs, Malla (2021) contends that mainstream training for most personnel fails to adequately prepare them for complex, multi-hazard scenarios. This view is supported by sector-specific analysis. Bhattarai et al., (2020) call for enhanced training in disaster medicine and triage, particularly for personnel deployed as first responders in remote areas. Similarly, Singha (2019) advocates for integrating preparedness for emerging threats, such as cybersecurity breaches, into crisis management curricula to address modern vulnerabilities.

Finally, scholars consistently emphasize the need for improved civil-military coordination. A 2019 report by the National Reconstruction Authority (NRA) highlighted instances of unclear chains of command and overlapping responsibilities between security agencies and civilian government bodies, leading to operational inefficiencies and frustration. To remedy this, Koirala et al., (2018) recommend formalized joint simulation exercises and pre-established coordination frameworks that clearly delineates the roles of military and civilian actors, thereby ensuring a more seamless and complementary response.

Research gap: Despite the extensive documentation of these coordination failures and training deficits, a significant research gap exists. There is a pressing need to understand how to holistically implement known best practices within Nepal's specific federal governance structure. Current literature tends to diagnose problems in isolation but fails to provide an integrated strategy for simultaneously addressing these critical and interconnected gaps. These include the practical mechanics of inter-agency and civil-military coordination post-federalization (ADB, 2020; Sharma, 2020), the systematic integration of community knowledge with formal security operations (Koirala et al., 2018), and the development of ethical protocols for technology use (Parker, 2020). Furthermore, research lacks actionable frameworks for institutionalizing psychosocial support for personnel and translating gender policies into effective field protocols (Khan et al., 2022; Magar & Khanal, 2020), leaving responses less efficient and equitable. This study aims to synthesize these elements into a cohesive strategic framework.

Conceptual framework: This study conceptualizes the strengthening of Nepal's security sector -including the Nepal Army, Nepal Police, and Armed Police Force - as the independent variable influencing effective crisis management, the dependent variable. Key indicators

Figure 1: Conceptual framework of the study



of sectoral strengthening are: decentralization and collaboration, community participation, mental health and psychological support, technological advancement, and gender inclusivity.

Methods and Materials

This study has adopted an interpretivist research philosophy. By focusing on how security personnel perceive and respond to crises, this philosophy captures insights into the strategies of Nepal's security sector for effective crisis management.

A qualitative research approach was employed to explore the experiences and perspectives of key stakeholders in Nepal's security sector. Primary data were collected through semi-structured interviews, which allowed flexible yet guided conversations. Secondary qualitative data, including newspaper articles, prior studies, and official reports, were analysed to provide context and corroboration.

The study followed a qualitative descriptive research design. This design provided an accurate and comprehensive description of phenomena as experienced by participants. It was suitable for exploring operational dynamics, capturing individual perspectives, and highlighting the practical realities of crisis management within Nepal's federal governance framework.

The target population comprised personnel from Nepal's three primary security institutions: the Nepal Army, Nepal Police, and Armed Police Force. A quota sampling strategy ensured representation across the three institutions, with five captains from the Nepal Army, five inspectors from the Nepal Police, and five inspectors from the Armed Police Force, totalling fifteen respondents. Secondary data were purposively selected from fifteen documents analysis including newspapers, reports, and previous studies to provide supporting evidence and contextual information.

Primary data were collected through semi-structured interviews with security personnel who had participated in past crisis response operations. Respondents shared their experiences, challenges, and suggestions regarding crisis management. Secondary data were obtained through fifteen documents analysis, including academic journals, government and NGO reports, past security sector response reports, and policy documents related to federalization and disaster management. Combining these sources ensured a comprehensive under-

standing of operational practices, gaps, and potential improvements in crisis management.

Data were analysed using thematic analysis, which identifies, organizes, and interprets patterns and themes within qualitative data. Analysis focused on five pre-determined themes derived from the conceptual framework: (1) decentralization and inter-agency collaboration, (2) community participation and local knowledge integration, (3) mental health and psychological support, (4) technological advancement, including drones and satellite imagery, and (5) gender inclusivity in operational protocols. This method allowed the synthesis of primary and secondary data into coherent findings, supporting actionable recommendations for strengthening Nepal's security sector in crisis management.

Data integration was conducted by analyzing primary and secondary data simultaneously, allowing for triangulation of findings. This approach ensured that insights from interviews were cross-checked and enriched with documentary evidence, providing a comprehensive understanding of operational practices, challenges, and gaps.

Ethical consideration involved obtaining informed consent from all participants, ensuring confidentiality, and using data responsibly. Secondary data were also handled in accordance with ethical research guidelines, respecting copyright, intellectual property, and proper citation practices.

Results

Decentralization and collaboration

Nepal's federalization has empowered local governments, but coordination with central security agencies often remains unclear, leading to delays and inefficiencies during crises (Asian Development Bank [ADB], 2020; Dixit, 2022). Effective collaboration between the security sector and local authorities is essential to ensure timely response and clear division of responsibilities. Respondents highlighted the need for joint planning and communication mechanisms. A Nepal Army captain stated, *"When we conducted joint drills with local officials, roles became clearer, and resource deployment was much faster"* (Interview, Lalitpur, March 2025). A Nepal Police inspector added that lack of shared protocols can create confusion during emergencies (Interview, Kathmandu, March 2025). Strengthening coordination through standardized operating procedures, regular joint exercises, and pre-disaster workshops can enhance synergy between security forces and local governments, ensuring a more unified and efficient crisis response.

Community participation

Active involvement of local communities enhances the effectiveness of crisis management by leveraging local knowledge and resources. Studies show that community-based disaster risk management improves preparedness and reduces casualties (Mercer et al., 2010; Adhikari et al., 2021). Respondents emphasized that community engagement is often limited, despite communities' familiarity with terrain, vulnerable areas, and traditional coping strategies. A Nepal Police inspector explained, *"Local residents know which areas flood first and where*

people need help, but they are rarely included in planning or drills" (Interview, Gorkha, February 2025). Incorporating community representatives into pre-disaster planning, awareness campaigns, and response exercises can strengthen early warning systems and facilitate timely, context-specific interventions, improving overall crisis management outcomes.

The psychological well-being of security personnel is crucial for sustained operational readiness. High-stress environments during crisis response contribute to burnout, anxiety, and post-traumatic stress disorder (PTSD) (Brooks et al., 2020; Khan et al., 2022). Respondents highlighted a lack of structured mental health support within the security sector. A Nepal Police inspector shared, *"After multiple disaster deployments, I often feel exhausted and anxious, and there is no organized system to access psychological support"* (Interview, Kathmandu, March 2025). Security personnel recommended regular mental health screenings, resilience training, and access to professional psychological services. Implementing these measures can enhance operational efficiency and reduce long-term mental health risks among frontline responders.

Technological advancement

The use of modern technology can significantly improve crisis management by enhancing situational awareness, decision-making, and operational efficiency. Studies highlight the potential of drones, satellite imagery, and geographic information systems for rapid damage assessment and targeted response (Parker, 2020; UNISDR, 2015). Respondents emphasized both interest and challenges in adopting these technologies. A Nepal Army captain stated, *"Drones and satellite data could help us quickly locate affected areas, but we lack training and proper infrastructure to use them effectively"* (Interview, Lalitpur, March 2025). Strengthening technological capacity through training programs, investment in equipment, and integration of tech-based tools into standard operating procedures can improve coordination, speed, and precision in disaster response operations.

Gender inclusivity

Ensuring gender-sensitive crisis management is essential for equitable and effective responses. Women and girls face heightened risks during disasters, including limited access to sanitation, healthcare, and protection from gender-based violence (Enarson, 2012; Magar & Khanal, 2020; IASC, 2015). Respondents recognized the importance of gender considerations but noted gaps in operational protocols. An Armed Police Force (APF) inspector stated, *"We understand that women and children are more vulnerable, yet our teams are not fully trained to address these specific needs during emergencies"* (Interview, Kathmandu, March 2025). Integrating gender-sensitive measures, such as safe spaces, dignity kits, and training on gender-based violence prevention, into crisis management strategies can enhance inclusivity and improve overall response effectiveness.

Discussion

This study investigated how Nepal's security sector can strengthen crisis management capacity through decentralization and collaboration, community participation, mental health sup-

port, technological advancement, and gender inclusivity. The findings corroborate, extend, and in some cases diverge from existing literature.

The results confirm the importance of decentralization in improving responsiveness but also highlight gaps in coordination between security agencies and local governments. Literature emphasizes that federal systems can enhance crisis response when local authorities are adequately empowered and supported (Heijmans, 2021; United Nations Office for Disaster Risk Reduction [UNDRR], 2015). However, as Dixit (2022) and Sharma (2020) note, Nepal's federalization has not yet translated into clear operational protocols. This study echoes these concerns: respondents described delays and confusion in the absence of standardized operating procedures. At the same time, positive experiences with joint drills demonstrate that collaboration is possible when institutionalized. This finding reinforces global best practices such as the Incident Command System (Buck, Trainor, & Aguirre, 2006), which Nepal could adapt to enhance inter-agency synergy.

The literature highlights the critical role of communities in disaster risk reduction, with models like Community-Based Disaster Risk Management (CBDRM) proving effective across Asia (Mercer et al., 2010; Paul, 2009). Consistent with these studies, respondents stressed that local residents possess vital knowledge about terrain and vulnerabilities but are rarely included in planning. This underutilization mirrors findings by Adhikari et al. (2021), who argue that Nepal has yet to meaningfully integrate local knowledge into formal response systems. The present study supports calls for institutional mechanisms that link community expertise with security sector operations, thereby aligning with the Sendai Framework's recognition of local actors as first responders (UNDRR, 2015).

The results revealed significant stress, burnout, and PTSD among security personnel, with limited access to structured psychological support. These findings are consistent with Brooks et al. (2020), who demonstrate the mental health toll of emergency response on frontline workers, and Khan et al. (2022), who documented PTSD prevalence in Nepal's disaster responders. While the World Health Organization (2013) recommends approaches such as Psychological First Aid and resilience training, respondents indicated these are not widely implemented in Nepal's security sector. This suggests a persistent research-to-practice gap: although the importance of psychosocial care is widely acknowledged, institutionalization remains weak.

Global research identifies drones, satellite imagery, and geographic information systems as transformative tools for crisis response (Parker, 2020; UNISDR, 2015). This study found strong interest in these technologies among security personnel, but also highlighted barriers of inadequate infrastructure, training, and integration into standard procedures. These findings echo Sandvik and Lohne's (2014) concern that low-resource contexts risk technological dependency if adoption is not paired with capacity building. Nepal's challenge is therefore not awareness, but implementation: to operationalize global best practices in a mountainous, resource-constrained setting.

The results underscore the disproportionate vulnerabilities faced by women during disasters, including lack of safe spaces and exposure to gender-based violence. These concerns align with the Inter-Agency Standing Committee's (2015) call for gender-sensitive crisis

management and Magar and Khanal's (2020) findings on women's exclusion in Nepal. Respondents acknowledged awareness but identified a lack of training and operational tools to address gender needs effectively. This illustrates what Enarson (2012) describes as the gap between gender policies and ground-level practice. Addressing this requires not only gender mainstreaming in national frameworks but also practical, field-level protocols such as the provision of dignity kits and training in gender-based violence prevention.

Taken together, the findings align closely with the conceptual framework of this study. Strengthening the security sector through improved collaboration, community integration, mental health support, technological adoption, and gender sensitivity contributes directly to more effective crisis management. However, the results also highlight persistent gaps between policy and practice. While literature provides models and recommendations, Nepal's federalized security sector continues to face implementation barriers, particularly in coordination, psychosocial care, and gender inclusivity. Bridging these gaps requires institutional reforms, capacity building, and sustained investment in both human and technological resources.

Conclusion

This study aimed to examine strategies for strengthening Nepal's security sector to achieve more effective crisis management, focusing on decentralization and collaboration, community participation, mental health support, technological advancement, and gender inclusivity. Guided by an interpretivist research philosophy, the study employed a qualitative approach to explore the experiences and perspectives of key stakeholders in Nepal's security sector. A qualitative descriptive research design was adopted to provide a comprehensive and accurate depiction of operational realities. The target population included personnel from the Nepal Army, Nepal Police, and Armed Police Force, with fifteen respondents selected through a quota sampling strategy to ensure balanced representation. Primary data were collected through semi-structured interviews, allowing participants to share insights on operational challenges and strategies, while secondary qualitative data from government reports, prior studies, and media articles provided contextual support. Thematic analysis was used to identify, organize, and interpret key patterns and themes across the data, focusing on the five pre-determined areas central to sectoral strengthening.

The findings indicate that Nepal's federalization has created opportunities for enhanced local response capacity but also highlighted gaps in coordination and communication between security agencies and local governments. Respondents emphasized the critical role of community knowledge, the need for structured mental health support for personnel, and the potential of technological tools such as drones and satellite imagery to improve operational efficiency. Gender-sensitive measures were identified as essential but currently insufficiently implemented.

Based on these insights, the study recommends standardizing operating procedures, conducting regular joint drills, integrating community representatives in planning and response, institutionalizing mental health programs, investing in technological capacity, and operationalizing gender-inclusive protocols.

References

Adhikari, D., Devkota, L., & Wu, Y. (2021). Local knowledge for effective disaster risk reduction in Nepal. *International Journal of Disaster Risk Reduction,* 58, 102278. https://doi.org/ 10.1016/j.ijdrr.2021.102278

Alexander, D. E. (2002). *Principles of emergency planning and management*. Oxford University Press.

Asian Development Bank. (2020). *Strengthening disaster resilience in South Asia: An overview*. https://www.adb.org/publications/disaster-resilience-asia

Bhattarai, P., Mahato, R. K., & Shrestha, S. (2020). *Assessment of medical readiness in disaster response: A case study of security forces in Nepal*. Journal of Emergency Medicine.

Brooks, S. K., Dunn, R., Amlôt, R., Rubin, G. J., & Greenberg, N. (2020). Protecting the psychological wellbeing of staff exposed to disaster or emergency at work: A qualitative study. BMC Psychology, 8(1), 1–13. https://doi.org/10.1186/s40359-020-00448-8

Buck, D. A., Trainor, J. E., & Aguirre, B. E. (2006). A critical evaluation of the incident command system and NIMS. *Journal of Homeland Security and Emergency Management,* 3(3). https://doi.org/10.2202/1547-7355.1252

Dixit, K. M. (2022). The challenges of federal disaster management in Nepal. In M. R. Islam (Ed.), *Disaster governance in South Asia* (pp. 145–162). Routledge.

Enarson, E. (2012). *Women confronting natural disaster: From vulnerability to resilience*. Lynne Rienner Publishers.

Government of Nepal. (2015). *Nepal earthquake 2015: Post disaster needs assessment*. National Planning Commission. https://www.npc.gov.np/images /category/PDNAVolume_A.pdf

Hanggi, H. (2004). Conceptualising security sector reform and reconstruction. *In Reform and Reconstruction of the Security Sector* (pp. 3–18). LIT Verlag.

Heijmans, A. (2021). *The politics of disaster governance: Lessons from the Philippines*. Springer.

Inter-Agency Standing Committee (IASC). (2015). *Guidelines for integrating gender-based violence interventions in humanitarian action*. https://interagencystandingcommittee.org/gender-and-humanitarian-action-0/documents-public/guidelines-integrating-gender-based-violence-interventions

Lindell, M. K., & Perry, R. W. (2004). *Communicating environmental risk in multiethnic communities*. Sage Publications.

Khan, M. A., Wagatsuma, Y., & Watanabe, K. (2022). Post-traumatic stress disorder (PTSD) and depression among security personnel involved in disaster response in Nepal. *International Journal of Mental Health Systems,* 16(1), 1–9. https://doi.org/10.1186/s13033-022-00565-y

Khanal, P. (2017). Communication challenges in disaster response in Nepal: A case study of the 2015 Gorkha earthquake. *Journal of South Asian Development,* 12(2), 223–242. https://doi.org/10.11 77/0973174117714137

Koirala, A., Dhakal, D., & Maharjan, S. K. (2018). Civil-military relations in disaster risk reduction in Nepal: A case study of the 2015 Gorkha earthquake. *Journal of Public Administration and Governance,* 8(2), 1–17. https://doi.org/10.5296/jpag.v8i2.13627

Magar, S., & Khanal, N. (2020). *Gender and disaster risk reduction in Nepal: A critical review*. *Journal of Gender Studies,* 29(4), 445–461. https://doi.org/10.1080/09589236.2019.1649561

Maharjan, S. (2019). The role of the Nepal Army in post-earthquake reconstruction and recovery. *Security and Strategy Journal*.

Malla, N. (2021). Gaps and challenges in disaster preparedness training for security personnel in Nepal. *Journal of Emergency Management,* 19(5), 342–352. https://doi.org/10. 5055/jem.2021.0631

Manyena, S. B. (2016). The concept of resilience revisited. *Disasters,* 40(4), 633–655. https://doi.org/10.1111/disa.12116

Mercer, J., Kelman, I., Taranis, L., & Suchet-Pearson, S. (2010). Framework for integrating indigenous and scientific knowledge for disaster risk reduction. *Disasters,* 34(1), 214–239. https://doi.org/10.1111/j.0361-3666.2009.01126.x

National Disaster Response Force (NDRF). (2022). *About us*. https://ndrf.gov.in/about-us

Ojha, D., Regmi, S., & Herat, S. (2018). The role of Nepal security forces in disaster response and recovery: A case study of the 2015 Gorkha earthquake. *Journal of South Asian Development,* 13(2), 221–240. https://doi.org/10.1177/0973174118791992

Parker, C. (2020). *Drones in humanitarian action: A guide to the use of airborne systems in natural disaster response*. Drone Adventures.

Paul, B. K. (2009). Why relatively fewer people died? The case of Bangladesh's Cyclone Sidr. *Natural Hazards,* 50(2), 289–304. https://doi.org/10.1007/s11069-008-9340-5

Sandvik, K. B., & Lohne, K. (2014). The rise of the humanitarian drone: Giving content to an emerging concept. *Millennium,* 43(1), 145–164. https://doi.org/10.1177/0305829814529470

Sharma, P. (2020). Inter-agency communication challenges in disaster response in Nepal: A case study of the 2015 Gorkha earthquake. *Journal of Public and Social Administration,* 16(2), 1–14.

Singh, A. (2019). *Cybersecurity preparedness in national crisis management frameworks*. Security and Crisis Management Review.

Sedra, M. (Ed.). (2016). *The future of security sector reform*. The Centre for International Governance Innovation.

Twigg, J. (2023). *The basics of community-based disaster risk management*. ODI. https://odi.org/en/publications/the-basics-of-community-based-disaster-risk-management/

United Nations Office for Disaster Risk Reduction (UNDRR). (2015). *Sendai Framework for Disaster Risk Reduction* 2015–2030. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

UNISDR. (2015). *The human cost of weather-related disasters 1995–2015*. United Nations Office for Disaster Risk Reduction. https://www.undrr.org/publication/human-cost-weather-related-disasters-1995-2015

World Health Organization (WHO). (2013). *Psychological first aid: Guide for field workers*. World Health Organization. https://www.who.int/publications/i/item/9789241548205

Authors' contribution statement

Lekhanath Khanal collected the data and drafted the manuscript. P.S. Aithal conceptualized the study, provided supervisory guidance, and critically reviewed the manuscript.

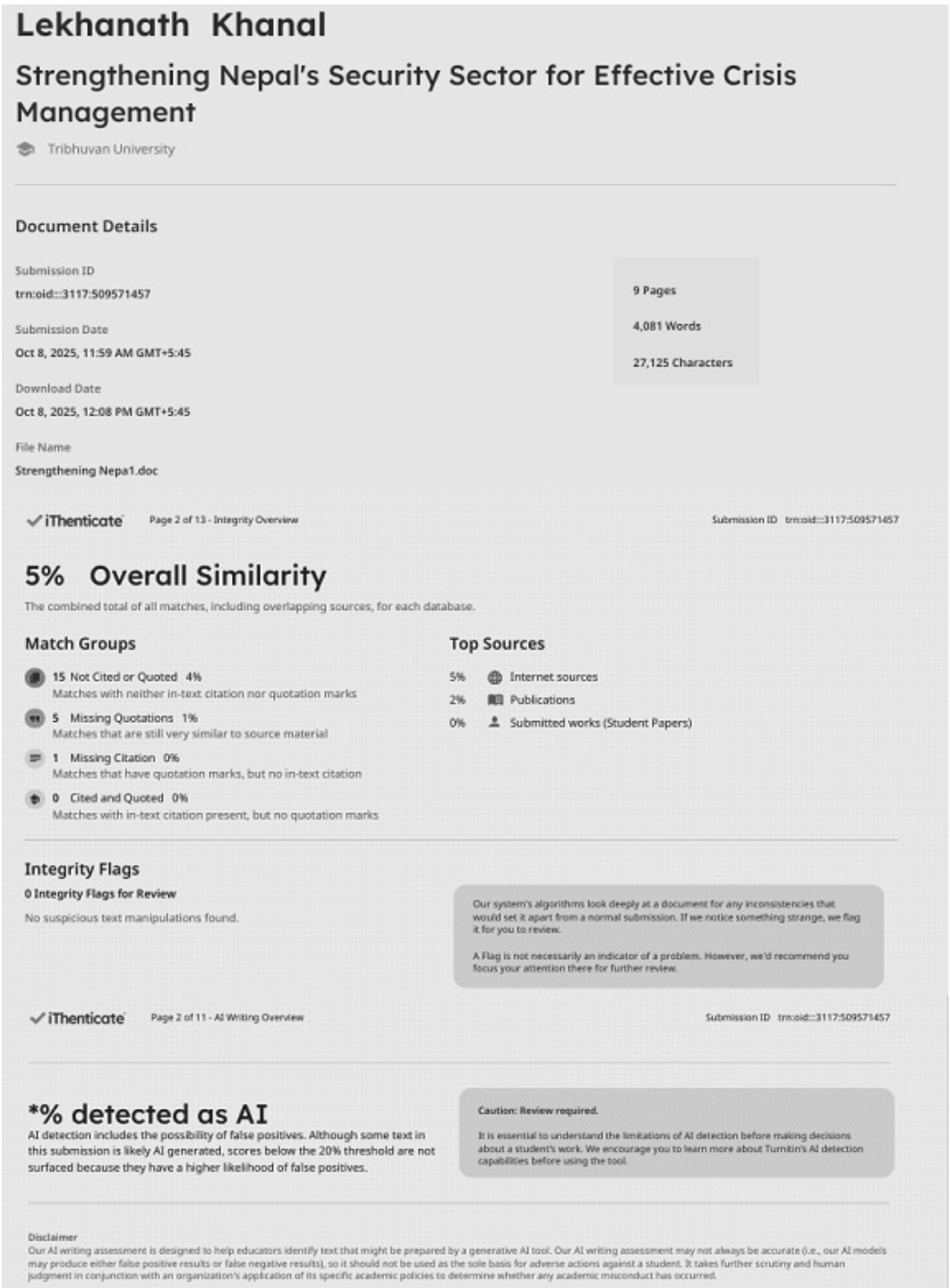
Acknowledgement

The authors gratefully acknowledge the fifteen respondents - five captains from the Nepal Army, five inspectors from the Nepal Police, and five inspectors from the Armed Police Force - and the editorial team of *UJIS* for their invaluable support.

Declaration of conflicting interest

Authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Appendix 1: Plagiarism and AI detection test report



Lekhanath Khanal

Strengthening Nepal's Security Sector for Effective Crisis Management

Tribhuvan University

Document Details

Submission ID
trn:oid:::3117:509571457

Submission Date
Oct 8, 2025, 11:59 AM GMT+5:45

Download Date
Oct 8, 2025, 12:08 PM GMT+5:45

File Name
Strengthening Nepa1.doc

9 Pages

4,081 Words

27,125 Characters

iThenticate Page 2 of 13 - Integrity Overview Submission ID trn:oid:::3117:509571457

5% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Match Groups

15 Not Cited or Quoted 4%
Matches with neither in-text citation nor quotation marks

5 Missing Quotations 1%
Matches that are still very similar to source material

1 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

5% Internet sources
2% Publications
0% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

iThenticate Page 2 of 11 - AI Writing Overview Submission ID trn:oid:::3117:509571457

*% detected as AI

AI detection includes the possibility of false positives. Although some text in this submission is likely AI generated, scores below the 20% threshold are not surfaced because they have a higher likelihood of false positives.

Caution: Review required.

It is essential to understand the limitations of AI detection before making decisions about a student's work. We encourage you to learn more about Turnitin's AI detection capabilities before using the tool.

Disclaimer

Our AI writing assessment is designed to help educators identify text that might be prepared by a generative AI tool. Our AI writing assessment may not always be accurate (i.e., our AI models may produce either false positive results or false negative results), so it should not be used as the sole basis for adverse actions against a student. It takes further scrutiny and human judgment in conjunction with an organization's application of its specific academic policies to determine whether any academic misconduct has occurred.