

Disaster Management Policies and Practices in Vulnerable Communities of Nepal: A Qualitative Analysis

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Abstract:- This study uses qualitative methods to assess the effectiveness of Nepal's National Policy for Disaster Risk Reduction (2018) in the Sankhu area, a community particularly vulnerable to natural disasters. Focusing on the Shankharapur Municipality in the Kathmandu Valley, the study examines the policy's impact on marginalized communities in the aftermath of the devastating 2015 earthquake. Comprehensive interviews were conducted with 30 participants, including earthquake survivors, local government officials, and community leaders. The analysis of these interviews revealed significant barriers to the policy's implementation. Notably, a lack of collaboration among various stakeholders involved in disaster management has hindered effective response and recovery efforts. The existing policy framework also fails to sufficiently address the unique needs of disadvantaged populations, potentially increasing their vulnerability during disasters. Moreover, the study identified that the rigidity of the current policy framework limits its adaptability to evolving disaster scenarios, further diminishing its effectiveness against future threats. Additionally, the findings indicate that inadequate community engagement strategies have weakened disaster preparedness and response mechanisms, ultimately limiting the overall impact of the policy. The study underscores the need for policy reforms that enhance Nepal's capacity to withstand natural disasters by addressing these critical areas for improvement.

Keywords:- Disasters, Awareness, Earthquake, Policy, Effectiveness, Implementation, Vulnerable Communities.

I. INTRODUCTION

Nepal, settled in the breathtaking Himalayan region, faces a high susceptibility to various natural disasters due to its complex topography and diverse climatic conditions (Pangali Sharma et al., 2022). This vulnerability is rooted in the country's intricate geological history, making it prone to significant events such as earthquakes, floods, landslides, and glacial lake outburst floods (GLOFs) (Li et al., 2022; Rieger, 2021). A poignant illustration of this vulnerability was the devastating magnitude 7.8 earthquake that struck Gorkha in 2015, resulting in extensive loss of life and infrastructure damage (Rieger, 2021).

In the southern Tarai region, monsoon floods pose annual threats to lives, property, and agricultural productivity, disproportionately affecting marginalized communities reliant on subsistence farming (Pangali Sharma et al., 2022). Additionally, urban heat effects in Nepal's cities exacerbate issues linked to global warming, with rising temperatures leading to increased frequency and intensity of heat events (Li et al., 2022). Despite advancements in disaster management strategies, such as the implementation of flood early warning systems, challenges persist in effectively reaching vulnerable populations due to limitations in monitoring smaller water bodies (Shrestha et al., 2021).

Nepal's multilevel governance system, undergoing restructuring, adds further complexity to disaster management, as identified by Vij et al. (2020). Although reforms aim to enhance governance effectiveness, they often lead to confusion in disaster management practices and policies. Challenges such as inadequate coordination among agencies, limited financial resources, and unclear roles hinder progress in disaster response (Narayan et al., 2022).

In light of the 2015 Gorkha earthquake, Nepal recognized the urgent need for a comprehensive disaster management policy, leading to the establishment of the National Policy for Disaster Risk Reduction in 2018 (MoHA & UNDP, 2018). This policy emphasizes addressing gaps in preparedness, response, and recovery, particularly in high-risk areas. Despite its noble goals, questions remain regarding the policy's effectiveness, especially for vulnerable communities disproportionately affected by disasters.

A thorough evaluation of the 2018 Disaster Risk Reduction Policy is essential to ensure it meets the needs of those most at risk. Engaging community stakeholders is crucial for understanding the policy's real-world implications and refining future disaster management strategies (KC et al., 2019). As Nepal navigates its unique vulnerabilities, it is imperative to adopt a proactive approach that emphasizes risk mitigation and community engagement in disaster resilience efforts.

II. STATEMENT OF THE PROBLEM

Research by Pangali Sharma et al. (2022) highlights that Nepal remains under constant threat from various natural disasters due to its diverse geography and fluctuating climate. The catastrophic Gorkha earthquake of 2015 underscored the country's vulnerabilities, prompting the government to introduce the National Policy for Disaster Risk Reduction in 2018 (MoHA & UNDP, 2018). While the policy aims to enhance disaster preparedness and response systems, concerns linger about its implementation and tangible impacts on marginalized communities (Vij et al., 2020).

An in-depth analysis of the policy is necessary to strengthen Nepal's capacity to withstand future natural disasters. Understanding the policy's execution is vital for safeguarding lives and infrastructure. This evaluation aims to ensure accountability, adaptability, and transparency within the governance framework (Shrestha et al., 2021). Moreover, it offers insights into the complex interplay between policy objectives, implementation challenges, and local-level outcomes.

Despite its theoretical strengths, empirical assessment of the Disaster Risk Reduction Policy is needed to evaluate its applicability and economic significance. Contextualized analyses are particularly essential for vulnerable communities like those in Sankhu, located in Shankharapur Municipality, Kathmandu Valley (KC et al., 2019). Sankhu exemplifies the broader vulnerabilities across Nepal, providing a rich context for evaluating policy effectiveness against diverse socioeconomic and cultural backdrops.

Given the multifaceted nature of disaster management, a qualitative research approach is warranted to capture the complex interactions influencing policy outcomes. By employing thematic analysis rooted in constructivist epistemology, this study aims to unveil the socio-cultural, political, and economic factors shaping disaster risk reduction efforts (Li et al., 2022). Through meticulous qualitative engagement, this research endeavors to enhance academic discourse and inform evidence-based policy reform.

➤ *Within the Intricate Landscape of Nepal's Disaster Management, Several Key Research Questions Arise:*

- What primary challenges do stakeholders encounter in implementing Nepal's Disaster Risk Reduction and Management Policy, particularly regarding inter-agency coordination?
- How do vulnerable populations, such as subsistence farmers and urban residents, perceive the responsiveness and effectiveness of the Disaster Risk Reduction and Management Policy in meeting their unique needs?
- What diverse perspectives and experiences do stakeholders have regarding the outcomes of policy strategies, such as integrating disaster risk reduction into development planning and building community-level capacity?

➤ *With the Concentrated Research Question Research Objectives are Derived*

- To explore the challenges and facilitators in implementing the Disaster Risk Reduction and Management Policy from the perspectives of key stakeholders.
- To examine the lived experiences and perceptions of vulnerable populations in disaster-prone regions regarding the policy's responsiveness and effectiveness.
- To investigate the diverse perspectives of stakeholders involved in disaster management regarding policy strategies aimed at enhancing local disaster resilience.

III. SIGNIFICANCE OF THE STUDY

This study is pivotal in integrating stakeholder perspectives into disaster management by investigating the experiences of those directly involved in the field. Conducted in Sankhu, this research contributes valuable insights into the effectiveness of the 2018 Disaster Risk Reduction Policy, emphasizing the gap between policy intentions and real-world outcomes.

By employing qualitative methodologies, the research illuminates nuanced perspectives on policy implementation, providing depth to the existing literature on disaster management in Nepal. The findings hold significant implications for strategic planning and policy formulation, offering insights for decision-makers and practitioners. By amplifying community voices, the research fosters a sense of agency among those most affected by disasters, enhancing participatory approaches in policy development.

Moreover, this study adds to the body of qualitative research in disaster management, establishing a methodological framework that can inform future studies globally. The findings not only aim to improve Nepal's disaster management practices but also aspire to serve as a model for disaster-prone regions worldwide.

IV. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Social Vulnerability Theory and the Policy Implementation Theory have been integrated into the theoretical framework of this study to offer a strong basis for the research.

A. Social Vulnerability Theory

Social Vulnerability Theory, introduced by Cutter et al. (2008), is a leading framework in disaster research that provides an extensive analysis of the factors contributing to varying levels of vulnerability to natural disasters across different communities. The theory delves into the complex web of social, economic, and political variables that shape vulnerability, rather than focusing solely on physical hazards. According to Cutter (2016), vulnerability extends beyond mere exposure to natural hazards; it is profoundly influenced by socioeconomic disparities, access to resources, and societal power dynamics. This approach, as emphasized by Adger (2006), highlights that marginalized communities are

particularly susceptible to the negative effects of disasters due to historic injustices and existing economic inequities in their regions.

A key strength of the Social Vulnerability Theory lies in its comprehensive exploration of vulnerability as an evolving condition. Cutter et al. (2003) argue that vulnerability fluctuates over time with changes in the social, economic, and political landscape, making this framework adaptable to a wide range of contexts. According to Dixit et al. (2007), the theory is especially relevant to Nepal, a country with a high susceptibility to natural disasters. For example, the 2015 Gorkha earthquake had significant impacts on the population, with aftershocks disproportionately affecting already marginalized groups. This theory's emphasis on examining the role of social structures and economic inequalities helps lighten why certain communities are more affected than others (Poudel, 2018).

The application of this theory is also valuable for policymakers, as it facilitates the identification of social factors that exacerbate vulnerability, enabling the creation of targeted strategies to address existing inequalities (Cutter, 2018). In Nepal, insights from the Social Vulnerability Theory could inform disaster management policies that prioritize resilience-building among the most vulnerable groups (Dahal, 2015). However, the theory is not without criticism. Wisner et al. (2004) suggest that the framework may overemphasize vulnerabilities, potentially overlooking the resilience and coping capacities within communities. Additionally, Eriksen (2010) notes that in rapidly changing social environments, continuous reassessment of vulnerabilities is essential.

In summary, Social Vulnerability Theory provides a robust foundation for understanding the differential impacts of natural disasters across societies. Fothergill and Peek (2004) emphasize that examining social structures and areas of weakness offers crucial insights for policymakers and researchers. For a country like Nepal, which faces recurring natural disasters, this theory underscores the importance of inclusive policies that address social divisions to protect vulnerable populations (Blaikie et al., 2014).

B. Policy Implementation Theory

Policy Implementation Theory, developed by Mazmanian and Sabatier (1981), offers a comprehensive framework for understanding the processes and challenges involved in implementing policies effectively. Originating in public administration and political science, this theory examines the complex interactions among actors, institutions, and socio-political contexts that influence policy outcomes. Hill and Hupe (2002) underscore the critical role of stakeholders including local communities, NGOs, and government agencies in shaping policy implementation, particularly in disaster management. Recognizing the diverse interests and power dynamics among stakeholders provides a clearer understanding of the barriers to effective implementation.

This theoretical framework is particularly relevant to disaster management, as it offers a lens through which to examine the implementation of policies designed to improve disaster preparedness, response, and recovery. For instance, Nepal's 2018 Disaster Risk Reduction Policy can be analyzed using this framework to assess both the formal structures and informal networks that influence its implementation. O'Toole Jr. (2000) suggests that such an analysis allows for a holistic evaluation, encompassing both explicit policy structures and implicit social networks that affect implementation outcomes. This dual perspective is crucial in countries like Nepal, where community-based initiatives and grassroots organizations play vital roles in building resilience to disasters (Birkmann et al., 2006).

Policy Implementation Theory provides a valuable tool for this study, facilitating an analysis of how well disaster management policies in Nepal are being put into action and identifying factors that support or hinder effective implementation. This approach aligns with broader discussions in disaster policy research, which prioritize understanding the mechanisms of policy implementation over policy formulation alone (Quarantelli, 1997). Moreover, this theory helps examine the roles of various stakeholders, the capacities they bring, and the constraints they face, which is essential for making nuanced recommendations to enhance community resilience and policy effectiveness in Nepal's disaster management framework.

In essence, Policy Implementation Theory serves as a robust framework for analyzing the complexities of policy execution in disaster management. By employing this theoretical approach, the study can contribute meaningfully to academic research and offer practical recommendations to inform real-world policy development in Nepal.

V. CONCEPTUAL REVIEW

The conceptual review is an essential part of academic research, focusing on identifying and defining the key concepts that form the foundation of a study. According to Smith (2018), the conceptual review establishes a solid theoretical base, guides empirical investigations, and shapes policy orientations. In this study, central concepts such as disaster management policies, social vulnerability, policy implementation, community resilience, stakeholder engagement, governance, and capacity building are examined through the perspectives of Social Vulnerability Theory and Policy Implementation Theory. This review of the literature, as noted by Johnson & Brown (2019) and Lee et al. (2020), aims to explore the intricate relationships between these theories and concepts, thereby establishing a robust framework for rigorous analysis.

This comprehensive analysis of the existing literature enables a profound understanding of these fundamental concepts, setting the stage for insightful research and practical recommendations in the area of disaster management in Nepal. The key components of the conceptual review are Resilience and Vulnerability, Community Engagement, Policy Implementation, Information and Communication Technology, Capacity Building, Environmental Sustainability.

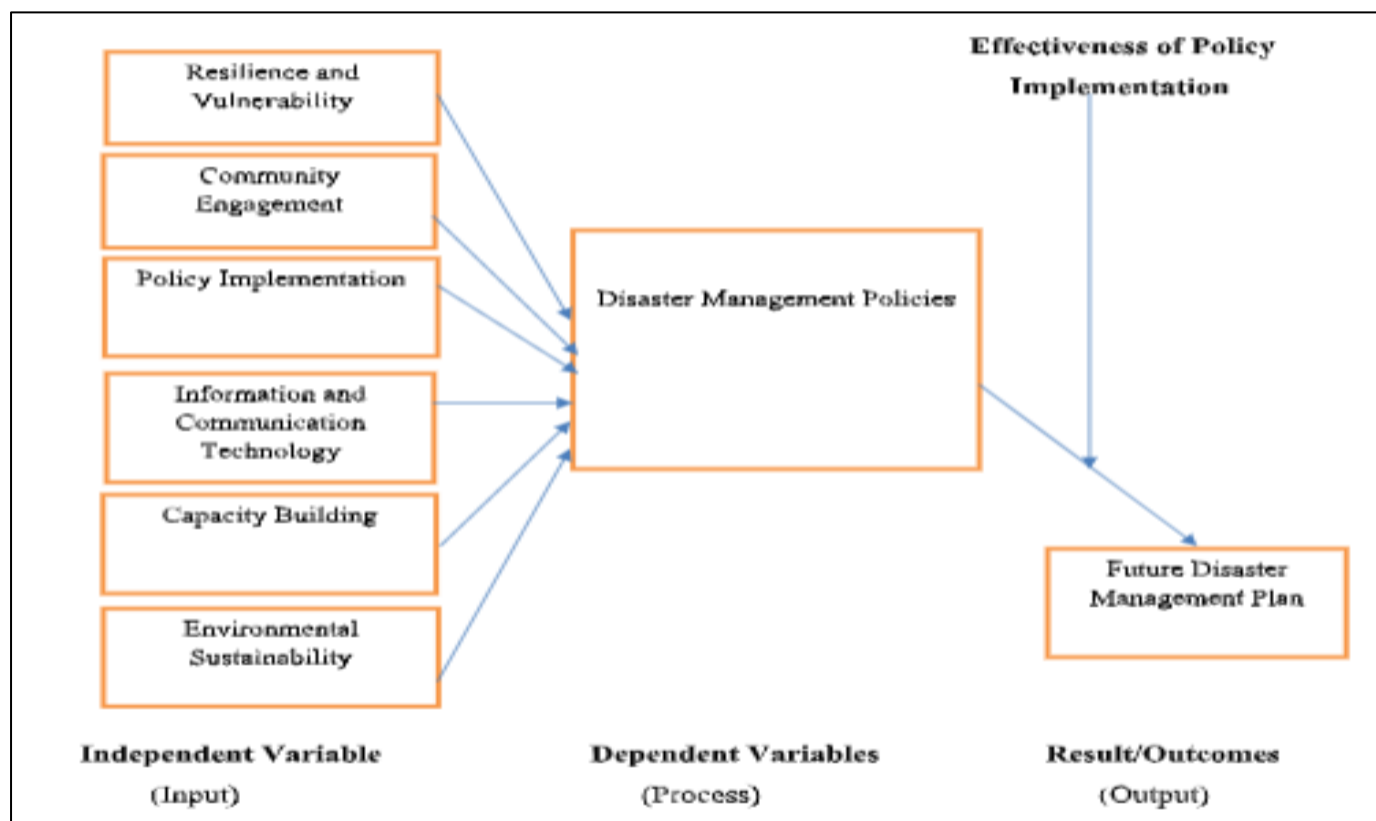


Fig 1: Showing Conceptual Framework

➤ Community Resilience

- Adaptive Resilience (Redevelop)
 - ✓ Adaptive Management
 - ✓ Continuous Learning
- Engineering Resilience (Reconstruct)
 - ✓ Bounce Back

VI. METHODOLOGY

The research design for this study is qualitative methods to deeply examine how vulnerable communities in Nepal, particularly in Sankhu, perceive and experience disaster management policies. Qualitative methods, such as in-depth interviews and focus groups, are essential in disaster management research to capture the nuanced social, cultural, economic, and political vulnerabilities that impact these communities. This approach also emphasizes cultural sensitivity and relationship-building, which are crucial when engaging with communities that may be wary of external researchers. The study applies a semi-structured interview format to allow for guided, yet natural conversations, facilitating a deeper understanding of complex local perspectives and the effects of disaster management policies.

The study is set in Sankhu, an ancient town near Kathmandu heavily impacted by the 2015 earthquake. The area's resilience and ongoing rebuilding efforts make it a pertinent case for assessing real-world disaster management

practices and understanding local responses to government aid. Purposive sampling was employed, focusing on residents who experienced direct impacts from the earthquake, local representatives involved in disaster response, and government officials. This approach ensures diverse perspectives, capturing the experiences and challenges of both community members and policymakers.

Data was primarily collected through unstructured interviews, allowing participants to share their lived experiences freely. Thematic analysis was then used to identify recurring patterns in the data, structured around themes like policy challenges, community impact, and the effectiveness of disaster response efforts. This method ensures a comprehensive, participant-centered analysis that reflects local complexities.

From the above discussion, mentioned processes and procedures with having rigorous literature review following themes are identified and generated and data are analyzed with the mentioned themes.

- Theme 1: Challenges in Policy Implementation
- Theme 2: Impact on Vulnerable Communities
- Theme 3: Policy Efficacy and Functionality
- Theme 4: Community Awareness and Engagement

A. Data Analysis

The effectiveness of disaster management policies in Nepal, a country highly susceptible to natural disasters, is critical to protecting vulnerable communities. This chapter

provides an in-depth qualitative analysis of these policies, focusing on their challenges, impacts on marginalized groups, and levels of community involvement. Interviews with government officials, local ward leaders, and directly affected community members helped to assess policy implementation, the barriers encountered, and community engagement levels. Given Nepal's frequent seismic activity and diverse climate challenges, robust policies are essential for reducing immediate disaster impacts and supporting sustainable recovery efforts. The findings reveal significant insights into the existing policies' efficiency and limitations, setting the stage for a critical review of policy functionality, social impact, and community inclusion.

B. Thematic Analysis

This study uses thematic analysis to examine Nepal's disaster management policies, delving into the perspectives of various stakeholders such as government representatives, local leaders, and community members. Key themes reflect the policy-making challenges, especially those that affect marginalized communities, and emphasize the need for adaptable and inclusive policy frameworks. Through analyzing themes such as coordination issues, disparities in aid distribution, policy efficacy, and community engagement, this analysis aims to support policy improvements that bolster societal resilience.

➤ Theme 1: Challenges in Policy Implementation

The qualitative analysis highlighted complex barriers to the effective implementation of Nepal's disaster management policies, particularly related to coordination and budgeting constraints.

- **Coordination Deficits:** Disorganized communication among government agencies, local authorities, and communities often impedes policy implementation, slowing down resource allocation and emergency response. Divergent goals among stakeholders create additional barriers to a cohesive disaster response.
- **Budgetary Delays:** Funding delays were consistently reported as a significant hindrance, restricting timely disaster responses and creating financial stress for vulnerable communities. The delay exacerbates the challenges faced by economically disadvantaged groups, obstructing their access to essential resources for recovery.
- **Implications:** Addressing coordination gaps requires inter-agency communication improvements, formalized decision-making processes, and stakeholder collaboration. Budget allocation mechanisms must also be reformed to ensure rapid response during disaster events, addressing logistical and socio-political issues that underlie policy implementation barriers.

➤ Theme 2: Impact on Vulnerable Communities

The analysis reveals that marginalized communities, particularly those already economically disadvantaged, face disproportionately negative effects due to ineffective aid distribution and lack of technical support.

- **Inequitable Aid Distribution:** Interviews showed that unequal resource distribution leaves financially vulnerable groups without adequate support, delaying their recovery and prolonging their hardships.
- **Housing and Technical Challenges:** Many affected communities reported inadequate housing support post-disaster, with some forced to remain in temporary shelters due to lack of resources. The lack of technical assistance for reconstruction further hinders the resilience and stability of these populations.
- **Implications:** Policy reforms must ensure equitable aid distribution and incorporate technical support tailored to the needs of marginalized communities. Addressing economic and housing vulnerabilities can enhance social resilience, facilitating faster, fairer recovery processes.

➤ Theme 3: Policy Efficacy and Functionality

Stakeholders indicated an initial optimism about policy implementation, followed by frustration as operational hurdles arose. Delayed budget allocations and an inability to adapt to evolving disaster management needs were identified as primary obstacles.

- **Operational Hurdles:** Initial progress often gave way to bureaucratic inertia, with stakeholders citing procedural delays and financial bottlenecks as factors undermining effective policy implementation.
- **Budget Delays:** Recurring delays in budget disbursement prevent timely disaster responses, suggesting that financial mechanisms need restructuring to support disaster readiness.
- **Implications:** This theme underscores the need for adaptive policy frameworks capable of responding to the dynamic requirements of disaster scenarios. Streamlined budgeting procedures are essential to maintaining policy effectiveness over time, ensuring swift, sustained disaster management responses.

➤ Theme 4: Community Awareness and Engagement

Interviews highlighted a significant gap in community awareness of disaster management policies, creating a disconnection between policy creators and the communities intended to benefit from them.

- **Limited Awareness:** A general lack of understanding among local communities about disaster policies undermines preparedness and delays emergency responses.
- **Cultural Heritage Overlooked:** The failure to preserve archaeological sites during disaster planning reveals gaps in policies that fail to address the protection of cultural heritage, which holds historical significance for communities.
- **Implications:** The identified gaps in community awareness and cultural considerations emphasize the need for inclusive disaster management approaches. Building robust engagement strategies and educating communities on disaster preparedness and policy details can bridge knowledge gaps and enhance overall policy impact.

- **Societal and Policy Implications:** The themes identified highlight both logistical and social challenges in Nepal's disaster management framework. Inclusive engagement with marginalized communities, culturally aware planning and efficient policy functionality are vital for building resilient, responsive disaster management systems. Policy implications point towards necessary reforms that include targeted stakeholder engagement, budget flexibility, and culturally inclusive planning to ensure comprehensive, effective disaster response strategies.

C. Data Analysis and Reflection

➤ *Thematic Insights: Key Challenges in Policy and Community Impact*

The thematic analysis of Nepal's disaster management policies reveals numerous critical issues, particularly around stakeholder coordination, support for vulnerable communities, adaptable policy frameworks, and community engagement strategies. This exploration not only highlights policy challenges but underscores the deep impact of these deficiencies on Nepal's vulnerable populations during disasters.

➤ *Coordination Deficits: An Urgent Policy Challenge*

A notable finding in the analysis is the widespread lack of coordination among stakeholders involved in disaster management. This fragmentation among government entities, local authorities, and community representatives impedes swift decision-making, efficient resource allocation, and timely disaster response. Strengthening coordination among these groups is an immediate priority for effective policy refinement.

➤ *Targeted Support for Vulnerable Communities*

The study indicates a pressing need for targeted interventions for vulnerable groups, such as economically disadvantaged individuals and subsistence farmers, who face unique risks from natural disasters. Current policies inadequately address these needs, underscoring the need for tailored interventions to foster resilience and ensure a fair recovery process for these groups.

➤ *Adaptable Policy Frameworks: Responding to Policy Deficiencies*

The analysis highlights the need for adaptable policies capable of handling evolving disaster-related challenges. Issues such as slow implementation, bureaucratic inertia, and delayed budget allocations points to the urgency of policies that are not only resilient but designed to adapt over time. Responsive policies are critical for addressing gaps and improving preparedness and response capabilities.

➤ *Community Engagement: Building Local Resilience*

Another significant insight is the lack of community engagement within existing disaster policies. Limited community awareness and minimal focus on cultural heritage protection indicate a gap in policy communication and inclusion. Strengthening community engagement through

better communication and active involvement can greatly enhance disaster preparedness, response, and resilience.

➤ *Policy Implications and Societal Significance*

The thematic findings underscore essential elements for policy improvement, including improved coordination, targeted support, adaptable frameworks, and enhanced community engagement. These themes form a foundation for effective policy reform, emphasizing the societal significance of inclusive, flexible, and community-centered disaster management approaches.

➤ *Stakeholder Perspectives on the 2018 Disaster Risk Reduction Policy*

Insights from key stakeholders local communities, government officials, and local representatives reveal a complex range of views on Nepal's disaster management policies:

➤ *Local Communities*

- **Limited Awareness:** A prevalent lack of knowledge about disaster policies restricts local engagement in preparedness and resource utilization.
- **Unequal Aid Distribution:** Many respondents highlight disparities in aid, which exacerbates the vulnerability of economically disadvantaged groups.
- **Neglect of Cultural Heritage:** The lack of focus on cultural heritage sites within disaster planning indicates a disconnection between policies and community values.

➤ *Government Officials*

- **Initial Optimism:** Some government representatives initially felt hopeful about the new policies' potential.
- **Implementation Hurdles:** However, ongoing frustrations due to operational delays and funding issues have impeded policy effectiveness.
- **Need for Flexibility:** Officials emphasize the need for flexible frameworks that can adapt to evolving disaster conditions.

➤ *Local Representatives*

- **Coordination Issues:** Local leaders express concerns about poor collaboration and communication among stakeholders, hindering effective resource allocation.
- **Impact on Vulnerable Groups:** Local officials highlight how disproportionately disasters affect marginalized communities, advocating for more inclusive policies.
- **Essential Role of Community Engagement:** The importance of engaging communities is underscored as a way to strengthen disaster preparedness and build a sense of shared responsibility for disaster management strategies.

This comprehensive analysis provides a strong foundation for recommending necessary policy reforms to create more resilient, inclusive, and community-centered disaster management in Nepal.

VII. CONCLUSION

This study undertakes a detailed qualitative analysis to evaluate the complexity and effectiveness of Nepal's disaster management policies, particularly their impact on vulnerable communities. Through thematic analysis, the research identifies core challenges such as stakeholder coordination, tailored interventions for vulnerable groups, adaptable policy frameworks, and effective community engagement. Key issues include deficient coordination among stakeholders, highlighting an urgent need for collaborative policy reform. The analysis underscores the necessity of targeted interventions that address the unique needs of marginalized groups and emphasizes the importance of flexible policies that can adapt to evolving challenges. Additionally, the study reveals the critical role of community engagement in enhancing disaster preparedness and response, suggesting that inclusive strategies are essential for building resilience.

This research provides essential insights into the gaps in Nepal's disaster management policies, highlighting areas requiring immediate improvement. Key issues such as inadequate stakeholder coordination, lack of tailored interventions, and inflexible policy frameworks illustrate the need for prompt policy modifications. The study underscores the value of collaboration among various groups to expedite disaster response, the necessity of targeted interventions for at-risk groups, and the importance of adaptable policy frameworks that can address emerging challenges. Community engagement also emerges as a fundamental component of effective preparedness. Overall, the findings point to the importance of adopting inclusive, flexible, and community-focused disaster management strategies to bolster the resilience of Nepal's vulnerable populations.

This exploration into Nepal's disaster management policies uncovers significant opportunities and obstacles, calling attention to the need for better coordination, targeted interventions, adaptive policies, and active community involvement. The research emphasizes the importance of policy reforms that prioritize marginalized communities and encourage an inclusive approach to disaster management. By advocating for community-centered, flexible policies, this study contributes to advancing resilience and improving disaster preparedness for Nepal's most vulnerable communities.

RESEARCH IMPLICATIONS

➤ *Policy Relevance and Effectiveness*

The findings underscore an urgent need for reform within Nepal's disaster management frameworks. Effective disaster management policies must be responsive, adaptable, and inclusive to address gaps in policy implementation and coordination. Given the ever-evolving nature of disaster risks, policies must be both resilient and immediately actionable.

➤ *Community-Centric Approaches*

The study highlights the crucial role of community involvement in effective disaster management. Current policies often lack community awareness and participation,

underscoring the need for community-centered approaches that incorporate local knowledge, encourage active engagement, and ensure that disaster policies align with the needs and concerns of local communities.

➤ *Enhanced Coordination Mechanisms*

Improving coordination among stakeholders in disaster management is critical. Establishing stronger communication channels and collaborative platforms will facilitate seamless information sharing and better decision-making. Workshops, regular meetings, and cross-agency training programs could enhance the synergy between government bodies, local authorities, and community representatives.

➤ *Vulnerability and Equity Considerations*

The study draws attention to the disproportionate impacts of disasters on marginalized communities. Disaster policies should prioritize equity and inclusivity, ensuring targeted interventions that reduce vulnerabilities among economically disadvantaged populations, subsistence farmers, and other at-risk groups.

➤ *Adaptive Policy Frameworks*

The analysis suggests that policies need to be flexible and adaptable to address dynamic challenges. The findings underscore the importance of policies that can learn, evolve, and incorporate lessons from past experiences to remain effective in changing disaster scenarios.

➤ *Cultural Heritage Preservation*

The research reveals a gap in the consideration of cultural heritage within disaster management policies. Protecting cultural heritage sites is essential in preserving the socio-cultural identity and economic resilience of communities. Future policies should integrate cultural preservation as a priority within disaster planning frameworks.

➤ *Continuous Learning and Improvement*

Disaster management policies require continuous improvement based on robust monitoring, evaluation mechanisms, and knowledge-sharing platforms. Cultivating a culture of learning and adaptation will help refine policies in line with real-world experiences and evolving best practices.

FUTURE RESEARCH ISSUES

➤ *Long-Term Policy Impact Assessment*

Longitudinal studies assessing the lasting effects of policy reforms within disaster management are essential. Evaluating the long-term impact of policy changes on community resilience and disaster response will provide insights into the sustained effectiveness of disaster management frameworks.

➤ *Community-Centric Policy Development*

Future research could delve into the dynamics of community engagement and its impact on policy effectiveness. Exploring the complexities of community-centered policy development, particularly around

participatory approaches and local knowledge integration, could advance disaster resilience in vulnerable communities.

➤ *Building Resilience in Marginalized Communities*

Research should examine the effectiveness of initiatives aimed at resilience-building within marginalized communities. Future studies may focus on assessing the impact of targeted interventions, capacity-building programs, and resource allocation strategies on the resilience of economically disadvantaged groups and subsistence farmers.

➤ *Dynamic Policy Adaptation Strategies*

Exploring strategies for dynamic policy adaptation could offer valuable insights into maintaining policy relevance. Research on frameworks that enable rapid adaptation to changing disaster scenarios and emerging risks would contribute to the agility of disaster management policies.

➤ *Cultural Heritage Protection in Disasters*

Future studies could investigate disaster policies and protocols dedicated to preserving cultural heritage sites, which remain underexplored. Research could assess the socio-cultural and economic impacts of cultural preservation in disaster contexts, informing more holistic disaster management strategies.

➤ *Comparative Policy Analysis*

Conducting comparative analyses of disaster management policies across regions or countries could provide valuable insights. Such studies could identify best practices and adaptable policy models, contributing to improved policy frameworks and community engagement strategies on a global scale.

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