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Enhancing Resilience through Policy Frameworks: The Role of Regional Cooperation in Disaster Risk Management in South Asia

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Source: UNDRR

Introduction:

South Asia is among the most disaster-prone regions globally, experiencing frequent natural catastrophes like cyclones, floods, earthquakes, and landslides. The region's geographical diversity, along with the escalating effects of climate change, has intensified the frequency and

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severity of catastrophic disasters, presenting substantial threats to human lives, economic stability, and infrastructure. Bangladesh, India, Nepal, Sri Lanka, and Pakistan have consistently encountered catastrophic floods and cyclones, whilst Nepal and northern India are particularly vulnerable to seismic events. The increasing population, swift urbanization, and socio-economic disparities exacerbate vulnerabilities, rendering disaster risk management (DRM) an important imperative.²

Notwithstanding separate national initiatives, disaster threats surpass borders, requiring a collaborative regional strategy. A disjointed response to disasters frequently results in inefficiencies, redundant efforts, and delays in humanitarian assistance. Collaborative regional efforts involving information exchange, resource mobilization, and policy alignment can strengthen collective resilience. Entities like the South Asian Association for Regional Cooperation (SAARC) have initiated measures to tackle Disaster Risk Management (DRM), notably through the creation of the SAARC Disaster Management Centre (SDMC). Nonetheless, these initiatives have been constrained in both scope and efficacy due to obstacles such as political discord, insufficient finance, and a deficiency in institutional coordination.

This commentary examines the function of policy frameworks in bolstering resilience via regional collaboration in South Asia's catastrophe risk management. It highlights the necessity for robust policy integration, improved data-sharing frameworks, and synchronized emergency response tactics to establish a resilient South Asia capable of efficiently mitigating and recovering from disasters.³

² Mall, Rajesh K., Ravindra K. Srivastava, Tirthankar Banerjee, Om Prakash Mishra, Diva Bhatt, and Geetika Sonkar. "Disaster risk reduction including climate change adaptation over south Asia: challenges and ways forward." *International Journal of Disaster Risk Science* 10 (2019): 14-27.

³ Petz, Daniel. "Strengthening regional and national capacity for disaster risk management: the case of ASEAN." *Brookings-LSE Project on Internal Displacement* 14 (2014).

The Evolving Landscape of Disaster Risk in South Asia

The landscape of disaster risk in South Asia is undergoing a rapid transformation as a result of environmental degradation, climate change, and socio-economic progress.⁴ The region is prone to landslides, earthquakes, floods, and cyclones, which are exacerbated by the increasing temperatures. Inadequate infrastructure and socio-economic disparities have exacerbated vulnerabilities, while rapid urbanization and population growth have increased exposure to hazards. Proactive risk reduction measures are required in countries such as Bangladesh, India, Nepal, Sri Lanka, and Pakistan due to the frequent occurrence of natural disasters. Disaster risks transcend borders, necessitating a regional approach for effective mitigation, preparedness, and response, despite national efforts. In order to reduce the effects of disasters and increase resilience in South Asia, it is imperative to implement coordinated strategies, data-sharing, and strengthened policies.



Source: CESDRR

⁴ Vij, Sumit, Caroline Russell, Julian Clark, Binod Prasad Parajuli, Puja Shakya, and Art Dewulf. "Evolving disaster governance paradigms in Nepal." *International Journal of Disaster Risk Reduction* 50 (2020): 101911.

Regional Cooperation: A Strategic Imperative for Disaster Management

Effective disaster risk management in South Asia necessitates regional collaboration due to the transboundary nature of numerous disasters. The region's countries are exposed to common risks, including the impact of cyclonic cyclones on coastal populations across multiple nations and the Himalayan glacial retreat on water resources. By fostering cross-border collaboration, disaster preparedness, response, and recovery efforts can be improved through the exchange of data, the sharing of resources, and the implementation of collaborative emergency protocols.⁵

Key Areas for Regional Collaboration in DRM: Information Sharing and Early Warning Systems:

Enhancing the real-time exchange of data on weather patterns, seismic activity, and flood forecasting by fortifying regional mechanisms, such as the South Asian Association for Regional Cooperation (SAARC) Disaster Management Centre.

Enhancing early warning capabilities across borders by utilising satellite technology and AI-driven predictive analytics.

Joint Response Mechanisms: The establishment of regional rapid response teams that can be mobilized during emergencies. Creation of standardised protocols for humanitarian assistance, which encompasses the development of coordinated logistics, medical aid, and evacuation plans.

Institutional Strengthening and Capacity Building: Encouraging regional training programs for local government officials and disaster response professionals. Integrating the most effective strategies from neighboring countries to fortify national disaster management agencies.⁶

Resilient Infrastructure and Sustainable Recovery: Investing in climate-resilient infrastructure initiatives that can withstand extreme weather events. Fostering enduring disaster recovery and reconstruction initiatives through public-private partnerships.

⁵ Mishra, Vivek. "India–US Defence Cooperation: Assessing Strategic Imperatives." *Strategic Analysis* 42, no. 1 (2018): 1-14.

⁶ Comfort, Louise K., Mark Dunn, David Johnson, Robert Skertich, and Adam Zagorecki. "Coordination in complex systems: increasing efficiency in disaster mitigation and response." *International Journal of Emergency Management* 2, no. 1-2 (2004): 62-80.

Policy Frameworks for Strengthening Resilience: In order to institutionalize regional cooperation, South Asian countries must synchronize their disaster management policies with international frameworks, such as the Sendai Framework for Disaster Risk Reduction (2015-2030). The following should be the primary focus of national policies Disaster resilience is incorporated into development planning through risk-informed governance.

Empowering local populations through disaster awareness and preparedness training, community-based resilience development.

Financial mechanisms, such as regional risk pooling and insurance schemes, are implemented to facilitate post-disaster recovery.

Existing Policy Frameworks: Strengths and Gaps

National policies and legislative frameworks have enabled South Asian countries to make substantial progress in disaster risk management (DRM). The majority of countries have implemented disaster management authorities, developed early warning systems, and synchronized their policies with international frameworks such as the Sendai Framework for Disaster Risk Reduction (2015-2030).⁷ Nevertheless, obstacles persist in the pursuit of a regional strategy that is both cohesive and effective, despite these endeavours.

Existing policies' primary advantages include:

Institutional and Legal Frameworks:

- National disaster management authorities with structured response mechanisms have been established in countries such as India (Disaster Management Act, 2005), Bangladesh (Standing Orders on Disasters, 2019), and Nepal (Disaster Risk Reduction and Management Act, 2017).

Early Warning and Preparedness:

- The Cyclone Preparedness Programme (CPP) in Bangladesh, which invests in satellite-based monitoring and enhanced forecasting, has improved early warnings for coastal communities, thereby saving lives.

Community-Based Disaster Risk Reduction (CBDRR): ○ Sri Lanka's Community-Based Disaster Risk Reduction Initiatives and Nepal's Local Disaster Risk Management Planning (LDRMP) have

⁷ Moosmann, David, Stefan Majer, Sergio Ugarte, Luana Ladu, Simone Wurster, and Daniela Thrän. "Strengths and gaps of the EU frameworks for the sustainability assessment of bio-based products and bioenergy." *Energy, Sustainability and Society* 10 (2020): 1-19.

enabled local communities to respond effectively.⁸

SAARC and Other Regional Mechanisms: Successes and Deficits :

The South Asian Association for Regional Cooperation (SAARC) has been at the vanguard of regional disaster management efforts, with initiatives that are designed to enhance resilience among member states. The SAARC Disaster Management Centre (SDMC) was established to promote capacity development, policy coordination, and cross-border collaboration.

Regional Initiatives and SAARC's Successes:

- SAARC Disaster Management Centre (SDMC):
 - Developed regional frameworks for disaster preparedness and risk reduction.
 - Implemented capacity-building initiatives, which encompassed knowledge-sharing platforms and simulation exercises.
- SAARC Agreement on Rapid Response to Natural Disasters (2011):
 - Intended to simplify regional coordination for emergency response.
- Regional Early Warning Systems:
 - SAARC and the Indian Ocean Tsunami Warning System have enhanced disaster preparedness by sharing real-time data.
- South Asia-ASEAN Collaboration:
 - South Asia has begun to implement disaster risk management models from ASEAN, particularly in regional emergency response mechanisms.

Regional Mechanisms' Limitations and Obstacles:

1. Political Will and Lack of Implementation:
 - Member states have not fully committed to resource-sharing, resulting in many regional initiatives being underfunded and underutilised, despite agreements.
2. Limited Institutional Capacity:
 - The SAARC Disaster Management Centre is reliant on voluntary cooperation rather than binding enforcement, as it lacks operational autonomy.
3. Geopolitical Conflicts Influencing Coordination:
 - The effective collaboration in disaster management has been impeded by the India-Pakistan conflicts and other political disputes.
4. Duplication of Efforts Without Cohesion:
 - Redundancy is caused by the fact that individual countries have bilateral and multilateral disaster agreements that do not always align with SAARC's regional framework.

⁸ Pal, Indrajit, Vinit Raj, Anushree Pal, and Kullanan Sukwanchai. "Disaster risk reduction education (DRRE) and resilience in Asia-Pacific." In *Disaster Resilience and Sustainability*, pp. 667-683. Elsevier, 2021.

5. Inadequate Engagement of the Private Sector and Civil Society:

- SAARC has not incorporated the private sector into its disaster response framework, in contrast to ASEAN, which effectively engages businesses in disaster resilience.

Case Studies: Lessons from Regional Disaster Responses

Insights into the practical operation of regional cooperation and the areas in which enhancements are required are obtained by analyzing past disaster events. Both the successes and shortcomings of regional disaster management mechanisms are underscored by two significant disasters in South Asia: the 2004 Indian Ocean Tsunami and the 2015 Nepal Earthquake.



Source: Indian Recovery Platform

The 2004 Indian Ocean Tsunami was one of the most devastating catastrophes in modern history, affecting a number of South Asian countries, such as India, Sri Lanka, the Maldives, and Bangladesh. The tsunami exposed significant deficiencies in cross-border coordination and early warning systems, as there was no formal mechanism in place to notify coastal populations. Nevertheless, the catastrophe resulted in substantial regional enhancements to disaster

preparedness.⁹The Indian National Centre for Ocean Information Services (INCOIS) and the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS) have since been established, thereby reducing the risk of future tsunamis and improving real-time monitoring capabilities. Although these developments have been made, there are still deficiencies in the coordination of regional emergency response efforts and the sharing of information across borders.



Source: The New York Times

The significance of a swift regional response in disaster relief was underscored by the 2015 Nepal earthquake. Emergency teams, medical aid, and logistical support were deployed within hours of the catastrophe by neighboring countries, particularly India, as part of Operation Maitri, which was instrumental in the rescue and relief efforts. The effectiveness of coordinated efforts was restricted by the absence of a formal disaster response mechanism lead by SAARC, despite the fact that this underscored the advantages of regional cooperation. Furthermore, the necessity for enhanced pre-disaster planning and resilient infrastructure development was emphasized by the logistical and bureaucratic obstacles associated with aid distribution in Nepal.¹⁰These case studies indicate that, despite the enhancement of individual country responses, a regional framework for joint disaster preparedness and rapid response is still insufficient.

⁹ Nagami, Kozo, Tomoki Miyano, and Mohammad Naser Sediqi. "Medium to Long-term Impacts from In-situ Housing Reconstruction: Insights from Post-disaster Surveys of the Indian Ocean Tsunami and Nepal Earthquake." *International Journal of Disaster Risk Reduction* (2025): 105175.

¹⁰ Regmi, Kapil Dev. "The political economy of 2015 Nepal earthquake: Some critical reflections." *Asian geographer* 33, no. 2 (2016): 77-96.



Source: World Bank

Financing Disaster Risk Reduction: The Need for a Regional Approach

○ The establishment of sustainable financial mechanisms for preparedness, response, and recovery is a significant obstacle in disaster resilience initiatives. National disaster relief funds are frequently inadequate for catastrophic disasters in the majority of South Asian nations. A regional financing mechanism could consolidate resources and offer immediate financial assistance to nations that have been impacted, thereby decreasing their dependence on external aid.¹¹

○ The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is a regional disaster risk insurance mechanism that offers immediate financing to member states in the aftermath of disasters. This mechanism is a potential model for South Asia. By ensuring that funds are promptly available for post-disaster recovery, the SAARC Disaster Risk Insurance Facility (SDRIF) is a comparable initiative that could enable countries to more effectively support affected communities and rebuild infrastructure.¹²

¹¹ Coetzee, Christo, Sizwile Khoza, Livhuwani D. Nemakonde, Lesego B. Shoroma, Gideon W. Wentink, Maynard Nyirenda, Steven Chikuse et al. "Financing Disaster Risk Reduction: Exploring the Opportunities, Challenges, and Threats Within the Southern African Development Community Region." *International Journal of Disaster Risk Science* 14, no. 3 (2023): 398-412.

¹² Linnerooth-Bayer, Joanne, Aniello Amendola, Norio Okada, and Peijun Shi. "Disaster risk management: Pro-active financing to reduce vulnerability." (2007): 1-6.

○Climate financing is also essential for enhancing disaster resilience. Bangladesh and Nepal have utilised international climate funds, including the Green Climate Fund (GCF) and the Adaptation Fund, to finance climate-resilient infrastructure. Nevertheless, a regional collective approach to climate finance has the potential to enhance funding access and provide support for large-scale disaster mitigation initiatives. Member states could secure additional financial backing for disaster risk reduction initiatives by collaboratively submitting applications for international funding under SAARC.

○ Public-private partnerships (PPPs) can also be used to finance disaster resilience. By providing tax incentives and subsidies, governments can encourage businesses to invest in resilience-building initiatives, emergency response systems, and disaster-resistant infrastructure. The successful implementation of private sector engagement in disaster risk financing in ASEAN suggests that South Asia could adopt a comparable model to enhance financial resilience in the face of disasters.

Conclusion

A comprehensive policy framework that integrates regional cooperation into disaster risk management is necessary to enhance resilience in South Asia. Coordinated efforts among South Asian nations can enhance the preparedness, response, and recovery mechanisms, given the region's susceptibility to natural disasters. Knowledge sharing, coordinated resource mobilization, and joint early warning systems can substantially reduce the effects of disasters through effective regional cooperation. Resilience will be further enhanced by nurturing public-private partnerships, leveraging technology, and strengthening institutional frameworks. In conclusion, the development of a sustainable and adaptive disaster management strategy in South Asia necessitates a unified regional approach.