

Book review

Disaster Risk Reduction and Rural Resilience

Sudip Mitra and Rajib Shaw

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In *Disaster Risk Reduction and Rural Resilience*, editors Sudip Mitra and Rajib Shaw curate a timely and insightful exploration of how rural communities face disaster risks and build resilience through context-specific strategies. With a focus on agriculture, water management, gender dynamics and technology, the volume addresses the often-overlooked challenges and opportunities that define disaster risk reduction (DRR) in rural settings. Its interdisciplinary breadth, coupled with rich case studies, makes this volume an essential resource for scholars, practitioners and policymakers interested in rural sustainability and disaster resilience within the built environment.

Setting the stage: rationale and scope

The editors begin by emphasizing a critical research gap: rural areas, despite bearing the brunt of disaster impacts, receive less attention in DRR strategies compared to urban environments. The book argues that sustainable rural livelihoods are intrinsically linked to effective DRR interventions that integrate local knowledge, equitable governance and technological adaptation. Structured into four thematic parts – food and agriculture; water and sanitation; gender and social issues; and rural technology – the volume systematically unpacks the complex interplay between rural vulnerabilities and resilience-building strategies.

Agriculture and food: context-specific vulnerabilities

The initial chapters delve into the vulnerabilities of agrarian communities situated in diverse ecosystems – riverine plains, mountainous terrains and arid zones. Detailed case studies illustrate how floods, soil degradation and crop failures disrupt livelihoods and deepen poverty cycles. The book advocates for adaptive cropping systems, community-based forecasting and localized agronomic innovations as key DRR strategies. These narratives vividly capture the socio-ecological nuances of rural agriculture, highlighting the importance of designing ecosystem-sensitive interventions.

Water and sanitation: infrastructure and indigenous systems

The discourse then transitions into water management and sanitation, crucial pillars of rural resilience. Chapters examine how traditional water systems like rainwater harvesting and community-managed tanks not only address water scarcity but also fortify sanitation and public health. The relationship between clean water access, health outcomes and disaster



vulnerability is explored through practical examples, underscoring the need for investments in rural sanitation infrastructure. These chapters broaden the understanding of DRR by situating water and sanitation as central to resilient rural environments.

Gender and social dimensions: embedding equity in resilience

A particularly compelling section of the book addresses gender dynamics and social inclusion. Case studies demonstrate how women, despite their central role in rural economies, face disproportionate risks during and after disasters. The narratives argue for gender-responsive planning and inclusive decision-making structures, illustrating that true resilience is unattainable without addressing social inequities. The discussions on the vulnerabilities of children and persons with disabilities further enhance the book's focus on inclusive DRR strategies.

Technology and innovation: practical solutions for rural resilience

The final section explores the integration of technology in rural DRR efforts. Emphasizing affordability and local appropriateness, the book presents examples of mobile-based early warning systems, low-cost irrigation technologies and the use of remote sensing for agricultural monitoring. The authors stress that technological interventions must align with local capacities and cultural contexts to be truly effective. By advocating for grassroots innovation, the book challenges the traditional top-down approach often seen in DRR strategies.

Strengths: cohesive narrative and applied relevance

One of the book's major strengths lies in its cohesive narrative structure that weaves together diverse case studies into a unified exploration of rural resilience. The chapters transition smoothly, offering a layered understanding of how food systems, water management, social equity and technology converge to shape rural disaster resilience. The writing is accessible yet rich in empirical detail, making it valuable for practitioners, researchers and students alike. The focus on practical, community-driven solutions aligns well with global resilience frameworks, while also offering grounded insights specific to rural contexts.

Limitations: scope for broader geographies and governance focus

While the volume excels in capturing South and Southeast Asian rural experiences, its geographic scope remains somewhat limited. Expanding the lens to include rural contexts from Africa, Latin America, or the Pacific could have provided a more comprehensive global perspective. Additionally, although governance structures are touched upon, the book could benefit from a deeper examination of rural governance mechanisms and policy linkages, particularly how local governments can operationalize national and international DRR frameworks. Including such discussions would enhance the book's utility for policymakers and development practitioners working on rural infrastructure and resilience planning.

Relevance to built environment and DRR scholarship

For readers of the *International Journal of Disaster Resilience in the Built Environment*, this book offers crucial insights into how rural infrastructures – be they water systems, agricultural setups, sanitation facilities or early warning networks – are fundamental to community resilience. The volume's focus on the built environment in rural contexts fills a vital gap in current DRR literature, which often remains urban-centric. Engineers, planners, designers and policymakers engaged in rural development will find practical applications

and strategic frameworks that can inform resilient infrastructure planning and sustainable community design.

Conclusion and recommendation

Disaster Risk Reduction and Rural Resilience stands out as a well-structured, narrative-driven exploration of DRR strategies tailored for rural contexts. Its integration of agriculture, water management, gender equity and technology reflects a holistic understanding of resilience. While there remains scope for expanding its geographic and governance focus, the book succeeds in shifting the DRR discourse towards rural landscapes, advocating for community-centered and context-sensitive interventions.

This volume is a recommended read for scholars, development practitioners, policymakers and students engaged in disaster resilience, rural development and sustainable infrastructure planning. It not only enriches academic discourse but also serves as a practical guide for designing DRR strategies that resonate with the lived realities of rural communities.

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