

# Collaborative Governance in Building Community Resilience for Disaster Risk Reduction: Lessons from Kutch, Gujarat, India

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**Abstract:** This empirical research paper delves into the application of collaborative governance in fostering community resilience for disaster risk reduction (DRR) through social entrepreneurial initiatives (SEIs). Specifically, it draws insights from the unique context of Kutch, Gujarat, India, known for 'building back better' after the major 2001 Earthquake, its resilience to various natural hazards and aims to provide valuable lessons and reflections from real-world applications.

In an era marked by escalating climate-related challenges, effective DRR necessitates innovative approaches. This research focuses on the collaborative governance framework and its intersection with SEIs, specifically in the vulnerable region of Kutch, Gujarat. By examining the collaborative governance mechanisms employed in Kutch's social entrepreneurial endeavors, this research seeks to contribute to the evolving discourse on effective DRR. The lessons and reflections derived from this study aim to inform future policies and practices, emphasising the integral role of collaborative governance in enhancing community resilience for DRR.

The study employs a comprehensive empirical approach, combining qualitative interviews, case studies, and data analysis. It investigates the roles of local communities, governmental bodies, and social entrepreneurs in fostering resilience against diverse hazards prevalent in the region. The research unravels the multifaceted impact of collaborative governance, where local communities actively participate in decision-making processes. It sheds light on the symbiotic relationship between SEIs and building community resilience. Examples from Kutch showcase how innovative ventures, driven by social entrepreneurship, contribute not only to economic sustainability but also play a pivotal role in enhancing adaptive capacities against disasters.

The study reflects on the successes and challenges encountered in integrating collaborative governance and social entrepreneurship. It underscores the need for tailored approaches, considering the socio-cultural fabric and economic dynamics of the region. Additionally, the research emphasises the importance of fostering local leadership and empowering communities to co-create resilient pathways. The findings offer practical insights for policymakers, practitioners, and researchers engaged in DRR. The paper advocates for the integration of collaborative governance structures and SEIs into mainstream DRR strategies, with a focus on contextual relevance.

As disasters continue to test the resilience of communities worldwide, this research provides a nuanced understanding of how collaborative governance, coupled with social entrepreneurial endeavors, can serve as a robust foundation for disaster risk reduction. The lessons and reflections from Kutch, Gujarat, contribute to the evolving discourse on building sustainable and resilient communities in the face of escalating climate challenges.

**Keywords:** Collaborative Governance, Social Entrepreneurial Initiatives, Community Resilience, Disaster Risk Reduction

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## Introduction:

Hazards, both natural and human-induced, pose a significant threat to communities worldwide, causing widespread damage, loss of life, and disruption to livelihoods. In recent years, the frequency and intensity of disasters have increased, driven by climate change, urbanization, and environmental degradation (UNDRR, 2017). This has led to a growing recognition of the need for effective disaster risk reduction (DRR) strategies that build community resilience. The coping capacity of the community is paramount for safeguarding both lives and the economic well-being of communities, making disaster resistance a fundamental imperative (Lindbom, 2020). One of the primary goals of DRR is the protection of human lives, livelihoods, and assets along with the environment.

Community resilience is the ability of a community to withstand and recover from disasters. It encompasses a range of factors, including physical infrastructure, social capital, economic resources, and access to information and services (UNDRR, 2009). Building community resilience requires a collaborative approach that involves government, non-governmental organizations (NGOs), and communities themselves (UNDP, 2012).

Collaborative governance and social entrepreneurship are two emerging approaches that have the potential to address the challenges of DRR and build community resilience. Collaborative governance is a process by which multiple actors work together to achieve common goals (Ansell & Gash, 2008). Social entrepreneurship, on the other hand, is the use of market-based approaches to address social and environmental problems (Ashoka, 2000).

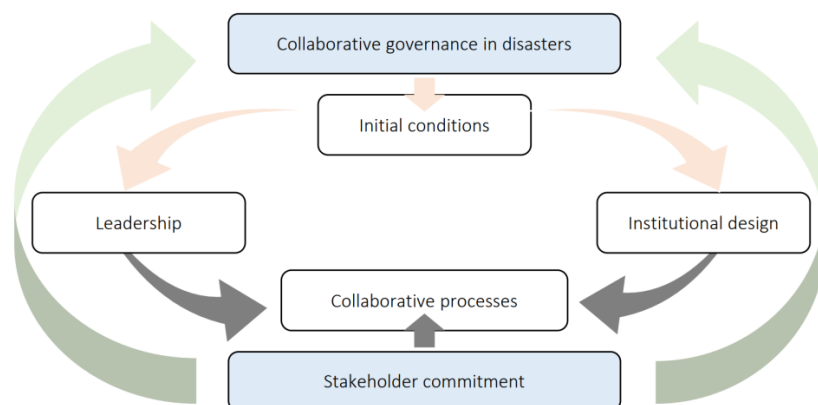


Figure 1: Collaborative governance in disasters (Slamet & Erdiyansyah, 2021)

In the context of DRR, collaborative governance can facilitate the development and implementation of effective DRR strategies that are tailored to the specific needs of communities (Ostrom, 2009). Figure 1 provides a framework of collaborative governance in disasters (Slamet & Erdiyansyah, 2021). It involves the active and inclusive participation of multiple stakeholders, including government agencies, non-governmental organisations (NGOs), and community.

The Kutch district of Gujarat, India, provides a compelling example of how collaborative governance and social entrepreneurship can build community resilience for DRR. Kutch is a disaster-prone region, vulnerable to droughts, cyclones, and earthquakes (Government of Gujarat, 2018). In 2001, the region was devastated by a major earthquake that killed thousands of people and caused widespread destruction.

### **Methodology:**

The research for this article employed a case study methodology to explore the effectiveness of collaborative governance through SEIs in the Kutch region of India. Two case studies were selected to provide in-depth insights into the implementation and outcomes of collaborative DRR initiatives in the region.

**Case Study Selection:** The two cases of SEI were selected for study based on their origin and experience of different disasters in the Kutch region of India. One case study is focused on an SEI that emerged out of prolonged droughts prevalent in the region, and another emerged after experiencing a massive earthquake in 2001 that devastated the entire Kutch region.

**Data Collection and Analysis:** Data for the case studies was collected through a combination of methods, including visit to the SEIs, review of project reports and publications, and field observations. Data analysis involved a thematic approach, identifying recurring themes and patterns across the two case studies.

### **Emergence of SEIs in Kutch, India:**

The unique geography of Kutch, characterised by its arid and semi-arid climate, diverse ecosystems, and rich cultural heritage, has played a crucial role in shaping the development of social entrepreneurship in Kutch. It is a vast and sparsely populated region, with a long history of drought and famine. In recent years, however, Kutch has become a hub for social entrepreneurship.

The geography of Kutch has played a significant role in the emergence of social entrepreneurship in the region. The region's harsh climate and remote location have made it difficult for traditional businesses to thrive. This has created an opportunity for social enterprises, which are often more adaptable and resilient than traditional businesses (Pathak & Mukherjee, 2018). The first social enterprises in Kutch emerged in the early 1990s. These early social enterprises were focused on providing necessities to the region's poor and vulnerable communities. Over time, social enterprises in Kutch have expanded their focus to include a wider range of issues, such as education, healthcare, sustainable agriculture, and environmental

conservation. (Patel, 2017). Social entrepreneurship in the traditional handicraft industry in Kutch employs thousands of people (Thakkar, 2016). The harsh climate of Kutch has led to a strong sense of community among the region's residents. This sense of community has made it easier for social enterprises to build relationships with local stakeholders and mobilize resources.

Pathak and Mukherjee (2020) state that Kutch has a rich Entrepreneurial Ecosystem (EE). They further state that the emergence of social entrepreneurship in the Kutch region serves as an exemplary model where the collective resilience and perseverance of the community, in the face of natural disasters and rapid urbanization, have played a crucial role in preserving and sustaining community-based craft as a viable economic activity.

Disasters often create opportunities. It serves as a catalyst for change, necessitating innovative approaches to rebuilding communities and restoring livelihoods. In the aftermath of the 2001 Gujarat earthquake, traditional models of recovery and aid fell short of meeting the needs of the affected population. This created an opportunity for social entrepreneurs to step in and address the gaps in the relief and rehabilitation efforts. One key characteristic of social entrepreneurship in the Kutch region is its emphasis on engaging and empowering local communities (Pathak & Mukherjee, 2020). By involving community members in decision-making processes and actively seeking their input, social entrepreneurs in Kutch foster a sense of ownership and resilience.

Disasters often disrupt existing livelihood patterns, leaving communities vulnerable and dependent on external aid. Social entrepreneurs in the Kutch region have recognized the importance of building sustainable livelihoods that can withstand future disasters. Disasters have also spurred innovation and the adoption of technological solutions in social entrepreneurship ventures.

## **Case Study I: Hunnarshala**

### ***Background***

The devastating earthquake of 2001 left Kutch in ruins. A group of organizations came together to help rebuild the city, but they knew that they couldn't just rebuild what had been lost. They wanted to create a more sustainable and resilient community. Hunnarshala was founded to regain the lost art of construction.

### ***Journey of the Organisation***

Along with the intention of empowering the workers of Kutch by providing them with employment, Hunnarshala began its journey renowned as *Abhiyaan*. This opportunity turned out to be fruitful for the unemployed in Kutch. In the wake of a devastating earthquake, the period of post-seismic rebuilding witnessed a widespread implementation of earth construction methods. During this transformative phase, artisans emerged as custodians of invaluable knowledge, showcasing the strengths inherent in traditional building systems and architectural designs. It became evident that the emerging ideas held significance not only for the immediate

reconstruction efforts but also held immense potential for fostering long-term sustainable development in various settings. The dynamic interplay between scientific advancements, modern building science, and traditional wisdom paved the way for identifying effective strategies to empower artisans in delivering exceptional quality structures, infrastructure, and communal spaces(Hunnarshala Foundation).

### *Identified Social Need*

Hunnarshala identified the need of constructing sustainable housing post 2001 Gujarat Earthquake. Traditional housing methods in Kutch often lacked the resilience to withstand natural disasters, leaving communities vulnerable to damage and displacement (Hunnarshala Foundation, 2023). Recognizing this need, Hunnarshala has focused on promoting sustainable and affordable housing solutions. Hunnarshala's efforts have led to the construction of thousands of disaster-resilient homes at an affordable cost. Other aspects were to address need for skills and livelihood opportunities. The Kutch region's economy is largely dependent on agriculture, making it susceptible to climate change and economic fluctuations (Hunnarshala Foundation, 2023). Recognizing the need for diversification, Hunnarshala has focused on empowering communities through skills development and livelihood opportunities.

### *Initiatives Undertaken*

It becomes an opportunity to foster long-term sustainable development, unveiling emerging ideas that hold immense value beyond immediate reconstruction efforts in the aftermath of the devastating earthquake. It was realised by the organisation that by bridging the gap between modern expertise and old-age artisanal skills artisans can be empowered to create high-quality buildings, infrastructure and traditional knowledge forms the foundation of Hunnarshala. Hunnarshala has demonstrated a number of projects including Kutch Earthquake Reconstruction, Artisan Enterprises, DEWATS (Decentralized Water Treatment System), Restoring the Heritage Mud Forts of UAE, Demonstration House After 2003 Bam Earthquake Iran, Indira Awas Yojana, 2004 Tsunami Rehabilitation in Aceh, Indonesia, Kosi Flood Rehabilitation, Urban Slum Redevelopment and Covid-19 Response Products.

### *Impacts and Outcomes*

Hunnarshala has significantly helped the revival of local artisanal knowledge and skills along with generating employment even after the devastating earthquake (Mushriff et al, 2019). It was the need of the hour to deliver high-quality housing that is sustainable and disaster-safe in the long run. Hunnarshala has empowered artisan entrepreneurs by providing them with the requisite knowledge, training and resources. Hunnarshala is a live example of how the communities if given the power to make their own decisions come up with the best solutions.

The high-quality work of Hunnarshala has resulted in buildings that are eco-friendly, resilient and in keeping with local vernacular. Hunnarshala helped revive traditional building techniques and knowledge that were in danger of being lost. This has helped to preserve a valuable part of Gujarat's cultural heritage and has also made it possible to build more

sustainable and resilient buildings. In the past few years, it has been noted that over 1,000 buildings have been built in Gujarat. These include schools, houses, and community centres (Rachidi, 2022). These buildings have provided much-needed infrastructure to communities and have also helped to create jobs and opportunities for artisans. This has also improved the economic well-being of the communities.

Hunnarshala has demonstrated the potential of community-driven development to create positive social and economic outcomes. By working with communities to identify their needs and to develop solutions that meet those needs, Hunnarshala has helped to create a more sustainable and equitable built environment. Patel (2010) highlights the effectiveness of livelihood diversification initiatives in reducing vulnerability and poverty among the communities in Kutch. Joshi (2013) showcases Hunnarshala's innovation in developing water conservation technologies, a crucial aspect of sustainable development in the arid region of Kutch. Parmar and Modi (2014) underscore the importance of community-based disaster education and awareness initiatives undertaken by Hunnarshala in enhancing disaster preparedness.

## Case Study II- Kala Raksha

### *Background*

The Kutch region of Gujarat is heavily stricken by drought-like conditions, resulting in low water holding capacity in the region. In the year 1992, the region was struck by its fourth drought calamity in a year, which resulted in huge economic losses to the agriculturalists in the region, thus giving rise to social problems like unemployment, hunger, and illiteracy in the region. Kala Raksha was developed as a response to the prevailing social problems in the region.

Kala Raksha is founded to eliminate unemployment and widespread hunger caused by the region's frequent occurrence of droughts. It is dedicated to preserving traditional arts and crafts while empowering artisans and their communities. Founded in 1993, Kala Raksha emerged as a response to the challenges faced by traditional artisans in the rapidly changing global market (Kala Raksha). Over the years, Kala Raksha has evolved into a multifaceted organisation with a comprehensive approach to artisan development.

### *Journey of the Organization*

Kala Raksha was founded to gather artists from various locations, preserve traditional art forms, and providing a source of income for the artisans. The craftspeople, community members, and professionals in the disciplines of art, design, rural management, and museums make up the organisation. The organisation was founded by a group of craftsmen from Sumrasar Sheikh, a village 25 kilometres from Bhuj. Today, more than 1,000 women artisans from seven ethnic tribes practise traditional needlework under the umbrella of Kala Raksha.

As the majority of the population was engaged in agriculture, the occurrence of drought conditions in the region forced the population to leave the occupation and rendered them

jobless, resulting in widespread hunger and unemployment in the region. The women of the region eventually worked for wages in the organisation as artisans; further, during the initial stages of the organisation, the artisans were the producers and consumers themselves. Gradually, due to the rise in footfall in the region, the art form of women started gaining popularity, which resulted in large-scale production of embroidery products.

### *Identified Social Need*

The need for starting the Kala Raksha arose from the pressing demands of preserving and promoting traditional arts and crafts, safeguarding cultural heritage, and uplifting marginalised artisans in the drought prone region of Kutch. In today's fast-paced world, traditional artistic practises are often overlooked and undervalued, leading to the erosion of cultural diversity and the impoverishment of communities that rely on these skills for their livelihoods. One of the primary reasons for initiating the Kala Raksha was to provide a platform for artisans to showcase their talents and revive endangered art forms. Many traditional crafts, passed down through generations, are at risk of extinction due to changing trends and modernization.

Kala Raksha acts as a bridge between artisans and consumers, providing marketing and entrepreneurial support, facilitating fair trade practises, and ensuring that artisans receive fair wages for their work. Additionally, the organisation plays a vital role in promoting social inclusivity and women's empowerment. Artisan communities often face discrimination and social marginalisation, particularly among vulnerable populations. Kala Raksha actively promotes gender equality by empowering women artisans and providing them with training opportunities, financial literacy programmes, and leadership development initiatives. By doing so, the organisation not only enhances their economic independence but also strengthens their social status within the community.

### *Initiatives Undertaken*

Kala Raksha was instrumental in giving assistance and rehabilitation to the impacted populations following the devastating earthquake that devastated Bhuj on January 26, 2001 (The mint, 2022). Kala Raksha helped the survivors by rapid mobilization of resources, including financial and human resources, development of income-generating options for craftspeople, and encouraged community-based programs and cooperatives.

Kala Raksha provided skill development, design aid, and marketing assistance through their comprehensive programs, allowing these artists to rebuild their lives and communities. The relentless efforts of Kala Raksha have not only regenerated the region's rich cultural legacy but have also empowered numerous individuals, leaving a lasting impact on the socioeconomic fabric of the earthquake-affected areas.

In 2005, Kala Raksha implemented an innovative education initiative, Kala Raksha Vidhyalaya (KRV), that aimed to provide relevant and practical knowledge to artisans. The initiative shifted from focusing solely on basic literacy to conducting weekly workshops on topics that were directly applicable to artisans' lives and work (Kala Raksha Vidhyalaya). The workshops were

designed to address the specific needs and challenges faced by artisans, such as keeping records of their work and payments, managing budgets, and understanding market dynamics.

### *Collaborations and Partnerships*

Along with local community and government, Kala Raksha has partnered with number of institutions and organisations of national and international repute. It receives grants from organisations such as the Bestseller Fund, COMO Foundation, Seagate, Sir Dorabji Tata Trust, and UNDP to support various aspects of the organisation's work, including capacity building, documentation, education, and raising awareness about critical social and environmental issues. Grants from the Bestseller Fund and the COMO Foundation, which have significantly contributed to its capacity-building initiatives. The Bestseller Fund generously provided a grant specifically aimed at supporting the expansion of marketing efforts associated with the development of Kala Raksha Vidhyalaya.

Kala Raksha has well established links with premier Indian design institutions, including the National Institution of Design (NID), the National Institute of Fashion Technology (NIFT), Srishti School of Art, Design and Technology, and the Indian Institute of Crafts & Design (IICD). Faculty from the Fashion Institute of Technology, NY, and the Rhode Island School of Design helped develop the basic curriculum for KRV.

### *Impact and Outcomes*

Kala Raksha has made a significant impact and achieved notable outcomes in its efforts to preserve traditional arts, empower artisans, and promote sustainable development. The organisation's multifaceted approach and comprehensive programmes have brought about transformative changes in the lives of artisans and their communities. The key impacts and outcomes of Kala Raksha's initiatives are seen in the form of economic empowerment of artisans, preservation traditional arts and crafts, skill development and capacity building and providing market access to artisans (Desai, 2007; Bhatia, 2011). Patel (2015) emphasizes the link between cultural preservation and sustainable livelihoods, showcasing Kala Raksha's model as an example of how cultural heritage can contribute to economic development.

Kala Raksha's interventions extend beyond individual artisans to encompass the entire artisan community. By organising community-level programmes, workshops, and discussions, the organisation has created platforms for artisans to voice their concerns, share experiences, and collectively address challenges. This sense of community empowerment has fostered a supportive ecosystem and strengthened social cohesion within the artisan communities.

### **Cross Case Analysis:**

Both Hunnarshala and Kala Raksha have demonstrated the importance of collaborative governance in achieving their respective goals of disaster resilience and cultural preservation. By fostering partnerships with government agencies, international organizations, academic institutes and local communities, these organizations have been able to leverage diverse perspectives, expertise, and resources to address complex social challenges.



Theme	Hunnarshala Foundation	Kala Raksha
<b>Origin</b>	Established in response to the 2001 earthquake in Kutch, focused on disaster resilience, sustainable housing, and skills development	Founded to preserve and revitalize traditional arts and crafts of the Kutch region providing livelihood opportunities to face prolonged droughts
<b>Identified Social Need</b>	Vulnerability to disasters, limited access to sustainable and affordable housing, need for skills and livelihood opportunities	Loss of livelihood, decline of traditional arts and crafts, loss of cultural heritage
<b>Initiatives Undertaken</b>	Disaster Risk Reduction (DRR) strategies, sustainable housing designs and materials, vocational training, livelihood opportunities	Skill development for artisans, market linkages for traditional crafts, cultural promotion
<b>Collaborations &amp; Partnerships</b>	Government agencies, international organizations, local communities	Government agencies, academic institutes, international organizations, artisan communities
<b>Impact and Outcomes</b>	Enhanced disaster resilience, reduced vulnerability to disasters, improved housing conditions, empowered communities	Revitalization of traditional arts and crafts, preservation of cultural heritage, economic empowerment of artisans

Hunnarshala's collaborative approach has been instrumental in developing and implementing effective DRR strategies, ensuring that disaster response measures are tailored to the specific needs and context of Kutch communities (Government of Gujarat, 2013; Parmar & Modi, 2014). The organization's partnerships have enabled it to secure funding, access technical expertise, and mobilize community participation, leading to a more comprehensive and sustainable approach to disaster risk reduction (UNDRR, 2009, 2015).

Similarly, Kala Raksha's collaborative efforts have played a crucial role in revitalizing traditional arts and crafts in Kutch (Desai, 2007; Bhatia, 2011). By working closely with artisan communities, government agencies, and market stakeholders, the organization has been able to identify and address the challenges faced by artisans, such as limited access to training, markets, and financial support (Patel, 2015). This collaborative approach has fostered a sense of ownership and responsibility among stakeholders, contributing to the preservation of cultural heritage and the economic empowerment of artisans (UNDRR, 2017; Patel et al., 2022).

The success of Hunnarshala and Kala Raksha highlights the transformative power of collaborative governance in addressing complex social issues (Ashoka, 2000). By bringing together diverse actors with shared goals, these organizations have been able to achieve greater impact than they could have working in isolation. Their experiences serve as a model for other

organizations seeking to make a positive impact on the world through collaboration and partnership.

### **Conclusion:**

Building community resilience for disaster risk reduction (DRR) requires a multifaceted approach that encompasses collaborative governance, social entrepreneurship, and community engagement. The Kutch region of India provides a compelling example of how these elements can be combined to achieve significant advancements in disaster preparedness and response.

The collaborative governance efforts in Kutch, involving government and non-government agencies, and communities, have fostered a shared understanding of disaster risks and promoted coordinated action to reduce vulnerabilities. This collaborative spirit has been instrumental in developing and implementing effective DRR strategies, including vulnerability assessments, early warning systems, disaster preparedness training, and risk mitigation measures.

The case studies of Hunnarshala and Kala Raksha demonstrate the transformative power of SEIs in addressing complex social challenges and promoting sustainable development. Their work in the Kutch region of India provides valuable lessons for other organizations seeking to make a positive impact in disaster-prone areas and regions with rich cultural heritage.

Social entrepreneurship has played a catalytic role in driving innovation and identifying creative solutions to DRR challenges in Kutch. Social entrepreneurs, motivated by a deep-seated commitment to social impact, have introduced innovative approaches to livelihood diversification, water conservation technologies, and disaster education, empowering communities to adapt and build resilience.

Community engagement has been at the heart of DRR efforts in Kutch. Communities have actively participated in all aspects of DRR, from planning and implementation to monitoring and evaluation. This active involvement has fostered a sense of ownership and responsibility among community members, ensuring that DRR strategies are tailored to their specific needs and context.

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