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Leadership for Disaster Resilience

Lessons from India

Jacquleen Joseph, Suchita Awasthi and Zubin R. Mulla



LEADERSHIP FOR DISASTER RESILIENCE

This book comprehensively conceptualises disaster resilience leadership within the macro context of a risk society. Leadership for disaster resilience has gained prominence in the face of global environmental change, and the need for collaboration, integration, and synergy in addressing this crisis is starker than ever. Drawing on case studies from across India, the volume focuses on leaderships of individuals, bureaucratic and political actors, civil society actors, and institutions. It looks at the ways in which disaster resilience leadership can address key challenges through the application of such theoretical perspectives as integrative public leadership, critical new institutionalism, and comparative realisation focused approaches to social justice. It highlights current leadership practices and envisages sustainable solutions to the environmental crisis by emphasising the need for disaster resilience leadership that could bring about systemic and socio-structural change.

Presenting fresh perspectives on leadership research, the book will be an essential read for scholars and researchers of disaster management, social work, management studies, development studies, environmental studies, and public policy. It will also be useful for NGOs and professionals working in the public sector and with civil society bodies.

Jacquleen Joseph is Professor at the Jamsetji Tata School of Disaster Studies (JTSDS) at the Tata Institute of Social Sciences (TISS), Mumbai. She has a master's in social work, followed by a MPhil and PhD in Psychiatric Social Work from the National Institute of Mental Health and Neuro Sciences (NIMHANS), India. She has been associated with JTSDS since its inception, and presently is the Dean and Chairperson of the Centre for Disaster Management. Her research, field action, and teaching are around psychosocial care and support in disaster and humanitarian contexts. She is actively engaged in long-term research and field action in the psychosocial domain in several disasters, starting with the 2004 tsunami to that of

the Nepal earthquake in 2015 and COVID pandemic. Some of the recent research and mobility grants in her areas of research interest are Disaster Resilience Leadership Research and Fellowship Project (BMG research grants 2017–19), Transboundary Water Governance and Capacity Building for Civic Engagement (ICIMOD—HUC Research Networking Grant, 2021), Epidemic Prediction and Risk Reduction using AI/ML (Newton Bhabha Research Networking Grant, 2021–22), and Disaster Risk Creation in Urban Resettlement Processes (Independent Research Fund Denmark—2021–25).

Suchita Awasthi holds a master's in climate science and policy from TERI School of Advanced Studies, India. Her specialisation involves vulnerability to disasters and climate change, community-based adaptation, and water resources management. She has almost ten years of experience in integrating climate science expertise into development research and practice. She is currently National Project Coordinator at Wetlands International South Asia. She has previously worked with not-for-profit organisations on rural development, community-based adaptation projects, and development of participatory approaches for vulnerability assessments. She has also worked with TISS as Senior Documentation Officer on projects related to disaster resilience building.

Zubin R. Mulla is Professor at the School of Management and Labour Studies at TISS, Mumbai. He has a degree in mechanical engineering, followed by a post-graduate diploma in business management and a doctorate in management from XLRI—Xavier School of Management, Jamshedpur. Prior to joining academics in 2005, he worked for seven years in engineering design and management consulting. As Management Consultant, he coordinated large-scale change management efforts in manufacturing and service organisations. His research interests include transformational leadership, values, Indian philosophy, careers, and evidence-based management. His research involves use of content analysis, survey methods, laboratory experiments, and field experiments. His pioneering contribution has been in conceptualising and validating the construct of Karma-Yoga in management literature.

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FOREWORD

It is a great pleasure to be writing the foreword to this important and timely book on leadership and disaster resilience. The COVID-19 pandemic and larger global challenges, such as climate change, have raised the importance of these topics in the public and academic mind. This book goes a long way towards addressing the key questions that these global challenges raise and the potential solutions that are on offer.

As such, the book makes contributions on three major fronts: substantive, conceptual, and methodological.

Substantively, the book's goals are ambitious and important. Its contribution lies in the attempt to bring the essence of transformative change, grounded in social and environmental justice, back into the discourse on leadership for disaster resilience. Further, it addresses these issues from the perspective of a wide range of actors, from the local to national levels, including individuals, public sector and civil society actors, and members of larger institutions.

Conceptually, the book is breathtakingly pioneering in its blend of disciplinary perspectives, from management and public administration to disaster studies and the social and political sciences. This interdisciplinarity results in a comprehensive framework for exploring leadership for disaster resilience. The engagement with the three contested but powerful concepts of disaster, resilience, and leadership to make a case for social and environmental justice is a significant contribution. Specifically, the book goes beyond individual–corporate dyads within the boundaries of an organisation to focus on collective/shared, grassroots leadership. As a result, it is able to explore the possibilities for addressing systemic and socio-structural transformative change. Further, the discussion of institutional leadership is a unique contribution as it goes beyond actors, such as institutional leaders, to focus on the structures of the institutions they are embedded in and the processes of institutional change and emergence that they influence and are influenced by. Finally,

the comprehensive conceptualisation of leadership draws from a broad range of theoretical perspectives that focus on different dimensions ranging from narrowly defined individual traits, skills, behaviour, competence, styles, tasks, functions, outcomes, to that of the immediate context, situation, macro processes, and structures. As such, the book makes a significant contribution to the attempts to reappropriate systemic and socio-structural transformative change within the disaster resilience leadership discourse.

Methodologically, a striking feature of the book is its multi-case study approach. The book includes a wide spectrum of case studies from different geoclimatic zones of India. These cases support the key arguments put forth in each thematic section of the book. The blend of theory and contextual case studies towards understanding the phenomenon of *Leadership for Disaster Resilience* makes it possible for both academics and practitioners to relate to the book.

Structurally, the book begins with an introductory chapter which identifies the significant gaps in the study of leadership in the context of disaster risk reduction and resilience building and addresses the same in the chapters that follow.

The analysis of case studies across thematic sections in the concluding chapter brings forth the following insights. First, the institutional embeddedness of leaders emerges as a significant theme in the study of leaders across spheres, contexts, and levels. The approach, values, and ethos of leadership are structured by the cultural ethos of the primary institutions and organisations they are embedded in. The book does not negate the possibilities of leaders' agency and value orientation but demonstrates how larger institutional processes structure leadership practices.

Second, several key challenges for disaster resilience and leadership emerge from the four thematic sections of the book, including community engagement and ownership, collaboration and integration of key stakeholders, and the limitations of institutional framework and arrangements that currently guide disaster resilience policy and action.

Third, the four thematic sections highlight the specific strengths and challenges encountered by leaders across spheres at various levels in facilitating disaster resilience in their respective constituencies. Recognising the synergistic relationship between actors and their actions, the book concludes with a framework that draws from the theoretical perspectives of integrative public leadership in exploring possibilities and the way forward.

Fourth, in contrast to the mainstream disaster discourse, which is preoccupied with the procedural aspects of justice and a focus on formal bureaucratic actors, this book argues for a change in focus and approach. To bring about transformative resilience, it argues that a reliance on institutional approaches or the procedural aspects of addressing the issues of structural inequalities needs to be combined with or replaced with comparative and realisation–focused approaches to structural inequality and injustice. Thus, apart from engaging with the ideal conceptions of institutions, guidelines, and policies, every leader in various spheres at all levels needs to look for the next best alternative in addressing everyday inequalities that they encounter in their world of practice. This reorientation towards actualising

distributive justice would set the base for meaningful social innovations that are contextual and cognisant of grassroots social relations and processes.

Once again, it is a great pleasure to help bring this book to the attention of diverse audiences with an interest in resilience and leadership. I have no doubt that it will have a great impact on many related fields of thought and practice in the years to come.

Jaideep Prabhu
Professor, Cambridge Judge Business School
University of Cambridge
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Jacquleen Joseph
Suchita Awasthi
Zubin R. Mulla

ABBREVIATIONS

ACWADAM	Advanced Centre for Water Resources Development and Management
ADB	Asian Development Bank
ADM	Additional District Magistrate
AFPRO	Action for Food Production
AGY	Adarsh Gram Yojana
ANANDI	Area Networking and Development Initiatives
BAIF	Bharatiya Agro Industries Foundation
BMZ	Federal Ministry for Economic Cooperation and Development
CC	Climate Change
CCT	Continuous Contour Trenches
CEO	Chief Executive Officer
CoEP	College of Engineering, Pune
COWDEP	Comprehensive Watershed Development Programme
CPR	Common Property Resources
CRED	Centre for Research on the Epidemiology of Disasters
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
DDMA	District Disaster Management Authority
DDP	Desert Development Programme
DM&R	Disaster Management and Rehabilitation Department
DMS	Devgadh Mahila Sangathan
DoLR	Department of Land Resources
DP	District Panchayat
DPAP	Drought Prone Areas Programme
DRR	Disaster Risk Reduction
DURCD	Department of Urban and Rural Community Development

DWDA	District Watershed Development Agency
EGS	Employment Guarantee Scheme
GDCR	Gujarat Development Control Regulation
GDP	Gross Domestic Product
GERI	Gujarat Engineering Research Institute
GERRP	Gujarat Earthquake Rehabilitation and Reconstruction Programme
GGP	Gram Gaurav Pratisthan
GIDM	Gujarat Institute of Disaster Management
GIZ	Gesellschaft für Internationale Zusammenarbeit
GOI	Government of India
GPS	Global Positioning System
GRAM	Group for Rural Alternative Movement
GSDA	Groundwater Survey and Development Authority
GSDMA	Gujarat State Disaster Management Authority
GSDP	Gross State Domestic Product
GSI	Geological Survey of India
GTZ	German Agency for Technical Cooperation
HAP	Humanitarian Accountability Partnership
HLWG	High-Level Working Group
HPC	High-Powered Committee
IAD	Institutional Analysis and Development Framework
IDNDR	International Decade for Natural Disaster Reduction
IGWDP	Indo-German Watershed Development Programme
IIM	Indian Institute of Management
IIPA	Indian Institute of Public Administration
IMD	Indian Meteorological Department
INCOIS	Indian National Centre for Ocean Information Services
ISR	Institute of Seismological Research
IWDP	Integrated Wasteland Development Programme
JFM	Joint Forest Management
JRY	Jawahar Rozgar Yojna
JTCDM	Jamsetji Tata Centre for Disaster Management
JTSDS	Jamsetji Tata School of Disaster Studies
JYG	Jalyukt Gaon Abhiyan
JSY	Jalyukt Shivar Yojana
KfW	German Bank for Development
LNP	Leh Nutrition Project
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MHA	Ministry of Home Affair
MMISF	Maharashtra Management of Irrigation Systems by Farmers
MoRD	Ministry of Rural Development
MSEB	Maharashtra State Electricity Board
MSSM	Marathwada Sheti Sahayya Mandal
MWRRA	Maharashtra Water Resources Regulatory Authority

NABARD	National Bank for Agriculture and Rural Development
NAFCC	India's National Adaptation Fund on Climate Change
NASDORA	National Authority for the Sustainable Development of Rainfed Area
NCDM	National Centre for Disaster Management
NCMC	National Crisis Management Committee
NCRF	National Calamity Relief Fund
NDMA	National Disaster Management Authority
NDMD	Natural Disaster Management Division
NDRF	National Disaster Response Force
NGO	Non-governmental Organisation
NIDM	National Institute of Disaster Management
NITI Aayog	National Institution for Transforming India
NP	Net Planning
NPM	New Public Management
NSC	National Safety Council
NSF	National Science Foundation
NWDPRA	National Watershed Development Project for Rainfed Areas
OSDMA	Orissa State Disaster Mitigation Authority
PDS	Public Distribution System
PIB	Press Information Bureau
PNP	Participatory Net Planning
PSI	People's Science Institute
PWD	Public Works Department
RDO	Rural Development Officer
RF	Reserve Forests
RM&DD	Rural Management and Development Department
RRAC	Risk and Regulation Advisory Council
RSMC	Regional Specialised Meteorological Centre
SDG	Sustainable Development Goal
SDMA	State Disaster Management Authorities
SEOC	State Emergency Operation Center
SEWA	Self-Employed Women's Association
SHG	Self Help Groups
SPA	Special Programme for Agriculture
SPIPA	Sardar Patel Institute of Public Administration
SWC	Soil and water conservation
TBS	Tarun Bharat Sangh
TCIT	Tata Community Initiatives Trust
TISS	Tata Institute of Social Sciences
TLA	Textile Labour Association
TRC	Tata Relief Committee
TSG	Tata Sustainability Group
UN	United Nations

UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNISDR	United Nations International Strategy for Disaster Reduction
USD	United States Dollar
VMV	Visthapit Mukti Vahini
WARASA	Watershed Areas' Rainfed Agricultural Systems' Approach
WEF	World Economic Forum
WHO	World Health Organization
WOTR	Watershed Organisation Trust
WS&SD	Water Supply and Sanitation Department
WUA	Water Users' Association
WWF	World Wildlife Fund
YMA	Young Mizo Association


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LEADERSHIP FOR DISASTER RESILIENCE

Natural hazards of unprecedented intensities or the unprecedented consequences of routine hazards are becoming increasingly normal. Coupled with the growing interdependence and interconnectedness of society, hazards, even if local in origin, may lead to global events with national and international policy implications. In a report published in 2017 by the United Nations International Strategy for Disaster Reduction (UNISDR), Mizutori and Guha-Sapir state that between 1998 and 2017, the countries affected by disasters reported a direct economic loss of USD 2,908 billion and a rise of 251% in losses from extreme events. Around 26 million people are pushed into poverty across the world and cost the global economy USD 520 billion per annum, excluding the economic loss data from 87% of the disasters in low-income countries (Mizutori & Guha-Sapir, 2017). Disasters reduce the gross domestic product (GDP) per capita growth (Klomp & Valckx, 2014) and significantly lower the per capita GDP, severely affecting poor countries (Felbermayr & Gröschl, 2014). This clearly shows that the impacts of disasters are greatest in impoverished communities, regions, or countries, like India, leading to additional financial and social burdens to the losses due to disasters (Cutter, 2014).

Due to its location and existing high socio-economic vulnerability, India is one among the high-risk countries. According to the Global Climate Risk Index (CRI) developed by the non-governmental organisation (NGO) Germanwatch, India ranks 14th in annual fatalities due to disasters and 4th in average damages resulting from disasters. In the COVID-19 pandemic that affected more than 100 million people across the world, India ranked second after the United States. Around 19 million people were infected, contributing to 13% of the total COVID-19 positive cases across the world, with more than 200,000 deaths in the country (until 1 May 2021) (World Health Organization [WHO], 2021). The economic losses in India due to disasters accounted for around USD 13,789 million in 2017 (Eckstein

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et al., 2018). Between 1900 and 2018, the country faced 643 major natural disasters, including droughts, earthquakes, floods, landslides, storms, and extreme temperature. This led to 4.6 million deaths and affected 24.02 billion people, causing a total damage of USD 97.6 billion. Most of the disasters in this time span occurred between 1961 and 2018, with 56% of total events occurring between 1991 and 2018 (Tripathi, 2019). If the average value of three parameters, namely economic losses, population affected, and the area affected by floods, were to increase by 10%, it would lead to a decline in per capita gross state domestic product (GSDP) growth by 0.0303%, 0.0633%, and 0.0232%, respectively, in the long run (Parida & Dash, 2020). It is noteworthy that the population affected parameter has a much greater negative impact on per capita GSDP growth compared to the other two parameters (Parida & Dash, 2020).

As this data demonstrates, the global environmental change crises and problems, such as climate change–related extreme events, increasing disasters, environmental degradation, and social inequity, have disproportionately soared in recent decades. The economic and social implications of these unprecedented hazard intensities and consequences have given rise to a common and urgent need to reflect, anticipate, and intervene for societal change, especially towards achieving sustainability, in multiple disciplinary circles. Recognising the need for comprehensive societal change, 2015 saw a major breakthrough in the global policy arena with three path-breaking global agreements for a sustainable and prosperous society, resilient to socio-economic and environmental disasters. These include the Sendai Framework for Disaster Risk Reduction 2015–30 (United Nations General Assembly [UNGA], 2015), the Sustainable Development Goals (SDGs) (United Nations [UN], 2015), and the Paris Agreement on Climate Change (United Nations Framework Convention on Climate Change [UNFCCC], 2015). As the challenges were understood to be interlinked and synergistic from a complex socioecological systems perspective, the need for more integrated and holistic management across sectors was realised within these global governance frameworks. Accordingly, at the policy level, there is a growing consensus that the challenges emerging from complex socioecological systems that are open-ended, non-linear, and highly uncertain need to be handled through non-traditional management and governance approaches that are multilevel and multiscalar, engaging multiple stakeholders (Munene et al., 2018).

Different governance approaches, ranging from adaptive management/governance to transition and transformation management/governance (Caro, 2016; Crosweller & Tschakert, 2020; Djalante et al., 2011; Foxon et al., 2009; Hölscher et al., 2018; Hurlbert, 2018; Hurlbert & Gupta, 2016; Jhagroe & Loorbach, 2015; Kenis et al., 2016; Loorbach, 2007; Mitra, 2013; Munene et al., 2018; Schäpke et al., 2017; Smith & Lawrence, 2018; Uhr, 2017; Voß et al., 2009; Walch, 2019; Zhang et al., 2012), have emerged in different disciplinary contexts, such as sustainable development, environmental studies, and climate change. The rethinking, proposed by these frameworks, ranges from developing capacity to maintain or adapt system functions during crisis and uncertainty to that of challenging the

status quo and bringing about radical, non-linear, systemic, and structural changes in complex socioecological systems.

Against this background of increasing significance for collaboration, integration, and synergy between various actors, the phenomenon of leadership, resilience, and disaster resilience leadership became prominent (Caro, 2016; Crosweller & Tschakert, 2020; DeChurch et al., 2011; Hannah et al., 2009; Marcus et al., 2006). There has been an increasing emphasis on leadership for steering societal change processes, especially considering the increasing risk and uncertainty. Transformative leadership; leadership transformations; multilevel systems leadership; and relational, authentic, and ethical leadership are among the key focus of exploration within the global framework for governing environmental crisis (Avolio & Gardner, 2005; Bass, 1985; Brown et al., 2005; Burns, 1978; Craig et al., 2015; DeChurch & Marks, 2006; DeChurch et al., 2011; Marks et al., 2001; Nichols, 2008). With the emerging need for convergence, resilience, as a concept that had its etymological origin in multiple disciplines, too, became one of the 'boundary object' (Ruszczyk, 2019). Resilience, thus, became a shared vocabulary across multiple disciplines, concerned with sustainable, systemic, and structural change albeit without a full agreement regarding its precise meaning.

Though there was a push for integrated action, the post-2015 global policy commitment and agenda for building resilient societies did not translate into a coherent approach that connects disaster risk reduction (DRR), climate change, and sustainable development practice. The three post-2015 global policy commitments are institutionalised under different "intergovernmental processes" and mean different things to different actors across diverse contexts and scales (Munene et al., 2018, p. 654). There was no consensus on how best to implement these processes across different policy sectors and management areas at various levels. The contribution of the scientific community towards these operational challenges, too, has been minimal and primarily limited to the formal institutional and policy arena in the context of sustainable development and climate change, and relatively scarce in disaster risk reduction. The multitude of other actors, institutions, networks, processes, and intrinsic and extrinsic macrolevel factors, including leadership, that shape resilience-building initiatives have not been comprehensively explored. This study on disaster resilience in the Indian context has been propelled by the need to explore resilience-building initiatives and their leadership in the context of disasters that comprehensively incorporated the complexities of socioecological and technical systems.

The three terms—'disasters', 'resilience', and 'leadership'—that come together in the coinage of *Leadership for Disaster Resilience* are extensively used in diverse disciplines and have become part of everyday language. However, all three are equally contested, with no common consensus on their definition and approaches. In this chapter, we attempt to operationalise each of these terms in relation to each other in order to develop a conceptual framework of disaster resilience leadership (DRL). The framework structures the focus of the study and criteria for the selection of case studies, and their analysis is presented in the chapters that follow. This chapter

focuses on recent and selected developments that are common across concepts and helps in bringing them together in drawing insights from the field of practice in the Indian context.

Disaster Resilience: Genealogy, Debates, and the Way Forward

Ever since the first recorded usage of the term 'resilience' in Latin proverbs in AD 300–400, it has been cited in works of art, literature, and everyday communication, primarily as a means to express emotions (Alexander, 2013). The historical etymology of resilience in science, traces its origin in mechanics for the study of the strength of echoes in 1625 and tracks its slow passage across different disciplines, such as ecology, anthropology, psychology, human ecology, sociology, and geography. It recently came into prominence, as a paradigm, in the emerging disciplines of sustainability, disaster risk, and climate sciences (Alexander, 2013).

The concept has acquired multiple meanings across different disciplines, such as to leap, to shrink, to avoid, to retract, to cancel, to return to a formal position, to desist, rigidity, ductility, coherence, system stability, robustness, strength, to adapt, to build buffering capacity, and to bounce back. In synthesis, the essence of the word has been to 'bounce back' until the beginning of the 20th century (Alexander, 2013). However, with its recent entry into the social sciences, and the emerging critique of bouncing back to states of vulnerability that exposed one to disasters in the first place, new meanings like 'bounce back better' and 'bounce forward' have emerged in recent years. The post-adversity positive growth and the acceptability of the improved state, to which the entity of interest recoils, have been acknowledged as some of the core essences of the concept of resilience. However, it is often ignored, as evident, even in the most quoted definition of disaster resilience:

> The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.
>
> *(UNISDR, 2009, p. 24)*

The use of the concept across varied disciplines has also led to the recognition of resilience as a boundary object, with the potential to bridge various academic disciplines, creating a conceptual space that facilitates the exploration of possibilities of working across disciplinary silos and developing interrelationships in the context of risk and uncertainties (Ruszczyk, 2019). In recent decades, with the rising uncertainty of global social and environmental challenges, the bridging potential of the concept has gained greater prominence in operationalising integrated action across the emerging disciplines of disaster, climate change, and sustainability sciences. In

academia and policy discourse, it has become one of the most sought after ideas to deal with uncertainty, change, and varied disruptions (Anderson, 2015). However, on the other hand, the debates over the usefulness of the concept also intensified during this period, especially its conceptual weakness, limited ability to inform new action, becoming a normative concept, co-option or appropriation of systemic and socio-structural transformative change, the unifying universal language of resilience, and the neoliberal political agenda of resilience, among others (Chandler, 2014; Cretney, 2019; Fainstein, 2019; Gleeson, 2019; Grove, 2013; Grove & Pugh, 2019; Hester, 2019; Lang, 2019; Lawrence et al., 2019; Lizarralde et al., 2015; Luke, 2019; Reid, 2019a; Rickards et al., 2019; Rogers, 2019; Zebrowski & Sage, 2019)

With the increasing uncertainty and a forced attempt to create a resilience paradigm (Alexander, 2013), 'resilience' has become a common term, not just in science and policy but in all fields of life, leading to a wide variety of meanings and definitions shaped by the diverse interest of diverse actors (including lay people, policymakers, researchers, practitioners, business corporations, organisations, and institutions) in diverse contexts. The multiple, versatile, and flexible conceptualisation of the concept across different disciplines and governance frameworks has resulted in a lack of conceptual agreement within academia (Chandler, 2014; Lizarralde et al., 2015) and a loss of explicit focus on people, power, and politics in practice (Ruszczyk, 2019). Resilience approaches are, thus, critiqued for colluding with a security agenda that depoliticises and reframes issues in such a way that the disaster-affected populations are made responsible for securing themselves and living in anticipation of the next danger/disaster on an everyday basis (Bracke, 2016; Tanner et al., 2017). Resilience is often considered to be a buzzword creating a "hype effect," losing its merits as a scientific concept or operational approach and is observed more as "cacophony, over investment and the quandary of upmanship of over-bidding" (Reghezza-Zitt & Rufat, 2015, p. xv–xvi) with serious policy, research, and practical implications (Coetzee et al., 2016). Resilience is, thus, not just a most sought after idea but also a highly contested idea in the field of disaster studies as it lacks the consensus similar to that which exists around other concepts, such as risk and vulnerability, among researchers, policymakers, and practitioners (Coetzee et al., 2016).

Despite its weaknesses and perspectives on whether it is a useful unifying concept or a tautology to be discarded (Mackinnon & Derickson, 2013; Reid, 2019b; Weichselgartner & Kelman, 2015), scholars recognise resilience as a powerful idea to be reckoned with due to its incursion into various disciplines, perspectives, sectors, actors, and institutions at multiple levels. Sarah Bracke (2016, p. 52) captures this inherent power of the concept:

> Resilience, in short, is a powerful idea whose deployment spans the macro level of ecological and economic systems to the micro-level of selves, and the complex circuits of power that connect and constitute these different levels of social reality.

The very prominence of the term calls for continuing engagement with not just the concept and the discourse but also its manifestation and materialisation in the social world (Cretney, 2019). Since disaster resilience, so far, has been a preoccupation primarily within science and policy circles, its obvious absence in the practical realm has caused recent scholars to turn their attention to the practice of resilience to better inform research and policy. This has led to a resurgence of the academic discourse on resilience, in an attempt to explore the possibilities for converting the predominant policy aspiration into robust analytical categories that could squarely inform future research and practice. In this revival, there has been an explicit focus on the lost or ignored essence of the concept of resilience, to address issues of structural inequality and injustice through systemic and socio-structural transformative change.

This book draws from the recent efforts of these scholars, who recognise the potential of the concept of resilience and argue for an alternate articulation that can or already exists (Gordon, 2020; Grove, 2013). These scholars recognise the fallouts of overtheorising the critique of neoliberal capitalism, which contributes to its very hegemony and the obscuring of alternate possibilities (Gibson-Graham, 2006; Larner, 2014). Consequently, they build on diverse new possibilities that resilience creates for both power and resistance, as it interfaces with place specific, cultural, political, economic, and ecological trajectories, in bringing about systemic and socio-structural transformations. The recognition of the neoliberal co-option of systemic and socio-structural transformation, using technocratic/bureaucratic strategies, is furthered to reclaim the same through an alternate conceptualisation of resilience that is subversive or radical. Although the critical scholars do not postulate a single essentialised conception of resilience or compartmentalise radical and subversive practices at the level of any particular actor or scale, in Table 1.1, we capture the essence of diverse alternate conceptions of resilience in contrast to the mainstream neoliberal concept to aid easy comprehension.

In summary, the key contention with the current resilience paradigm is about it becoming a normative concept, focused on the properties of people that would enable them to avoid, resist, respond, adapt, and recover from imminent disasters, rather than that of the system that contributes to differential vulnerability and disaster risk. As a result, the current resilience paradigm is heavily critiqued for denying vulnerability and not engaging with the issue of social and environmental justice and the neoliberal appropriation of systemic and socio-structural transformative change, recognised to be the essence of the concept of resilience. Taking all these aspects into consideration, we build on the essence of the concept and its possibilities, as postulated by critical scholars, to understand the possibilities of systemic and socio-structural transformative change in the context of disaster risk in India.

The ontology of possibilities, privileges practice at the grassroots/local level rather than macro systems, institutions, and policy frameworks, as a source of understanding to enhance research, action, and policy. Moreover, since resilience has predominantly remained a science or policy discourse, we consciously focus on interventions by different actors at various levels that address, or claim to address,

TABLE 1.1 Alternate Conceptions of Resilience versus Mainstream Neoliberal Concepts

Dimension	*Mainstream Conception of Resilience*	*Alternate Conception of Resilience*
Terminologies	Psychological resilience, community resilience, infrastructure resilience, social resilience, socioecological system resilience, sociotechnical system resilience, neoliberal resilience, regressive resilience, and reactionary resilience	Autonomous resilience (Cretney & Bond, 2014), subversive resilience (Grove, 2014), radical resilience (Cretney & Bond, 2014), and socio-structural transformative resilience (Rogers, 2019)
Core Values	Responsibility for self: ignores issues of inequality and justice	Responsibility for others: oriented towards social and environmental justice
	Self-reliance and self-sufficiency	Self-determination
	Agency, entrepreneurship, and empowerment of individual actors	Decentralisation, autonomy, respect, and dignity
	Individual rights and privileges	Recognition, representation, and redistribution
Focus	What state and non-state actors do to make people self-sufficient, self-reliant, and responsible for their own preparedness and recovery	What people do to work towards their vision of sustainable future, building on the spirit of the individual, collective, or community
Strategies	Adaptive/reflexive/transition/transformation management or governance	Resilience intersects with domination and resistance, and asserts the responsibility of the state and other actors
Concept of Subject	Emphasis on individualisation	Emphasis on relationality
	Assumption of a stable subject position	No authentic essentialised subject position
Vision	Unifying universal language of resilience	Plurivocity of visions reflecting the interest of entrenched groups
	Diverse visions are only recognised as subjective interest	"The subject is an effect of ontologically prior non-linguistic relations between people, things, desires, plans and strategies that form vulnerable citizens with multiple and potentially conflicting visions of a secure future" (Grove, 2013, p. 204)
Approach	Top-down approach	An approach that is grounded at the grassroots/local level and everyday scale

(*Continued*)

TABLE 1.1 (Continued)

Dimension	*Mainstream Conception of Resilience*	*Alternate Conception of Resilience*
Desired Change	Refutes the likelihood for a radical change by turning change into transformation that can be technocratically managed by transition or transformative leadership	Resilience as a concept with the potential for socio-structural transformation by participatory, shared, or distributed leadership
Strategies	Empowerment that flattens differences is viewed as a means of building resilience	No common language that grants self-determination to the vulnerable population
	Strategically uses exposure to danger/risk/disasters	"This ethos is sensitive to multiple sources of suffering and insecurity, and positively values adaptive capacities as the force of socioecological creativity" (Grove, 2013, p. 209)
	The use of apparent scientific precision of risk analysis and complexity theory to maintain the ethos of having to be prepared to face disasters at any point	Relies on people's new capacity for thought and action
Politics	Politics is perceived as an assertion of incommensurable differences. Politics involves differences that cannot be incorporated into a specified order of things and whose presence threaten its foundation	The focus is not on how politics limits resilience but involves the physical and psychic space, actual and "virtual, extensive and intensive from which novelty might irrupt without being exhausted in a techno-managerial will to govern" (Grove, 2013, p. 198)
Politics that Play Out	Politics of participation, post-disaster politics, and politics of crisis	Radical everyday politics
Knowledge Base	Expert scientific, technocratic, and bureaucratic knowledge	Local and traditional knowledge

the root causes of vulnerability. Since resilience has the potential to create new possibilities for both power and resistance, we include all actors, including public sector actors, working towards addressing disaster risk within the Indian context of increasing structural inequalities and injustice. Drawing from the earlier literature, disaster resilience is operationalised as follows to study disaster resilience leadership in India:

> The ability of a system, community or society encountering disaster risk, to resist, absorb, accommodate, adapt to, transform, and recover from, the

effects of a disaster, by addressing the root causes of a disaster through systemic and socio-structural changes, from within the value framework of social and environmental justice.

Disaster Resilience Leadership

Disaster leadership, specifically disaster resilience leadership, is a new area of study with few previous research. This book draws from existing literature on leadership, especially in crisis and extreme contexts, to conceptualise a framework to study disaster resilience leadership in India. Leadership has been a subject of scholarly interest for long, with an enormous amount of literature focusing on styles, frameworks, models, and theories. While this chapter cannot do justice to the massive task of summarising it all, we have attempted to capture recent reflections in the study of leadership, with special focus on studying disaster resilience in the Indian context.

The increasing recognition of the need for change and convergence in the ongoing context of global environmental crisis has brought the focus back on agents of change, especially the leadership for change. In the last two decades, leadership has become a key area of interest among several research and policy arenas, such as environmental management, climate change, sustainable development, and of late, disaster studies. However, like resilience, the term 'leadership', too, is often used loosely across disciplines without necessarily arriving at a consensus on what it means. We draw from existing theoretical literature, including the specificities of leadership in extreme contexts in the subsections that follow, to operationalise the definition of leadership for the current study of agents of change working towards disaster resilience.

Though most leadership theories centre on change, they differ significantly with regard to the core phenomenon that is focused upon, depending on the etymological origin of different theoretical strands. Theories of leadership focus on different dimensions ranging from narrowly defined individual traits, skills, behaviour, competence, styles, tasks, functions, outcomes, to that of the immediate context, situation, macro processes, and structures. However, the majority of scholarship on leadership focuses on individual leaders and has been critiqued extensively for its exclusive focus on individuals and corporate dyads within the boundaries of an organisation. As a result, there has been an impetus to shift from individual motives and behaviours to context-driven perspectives of leadership presence and organisational change, including inter-organisational leadership that transcends organisational boundaries. The subsections that follow build further on this gap in mainstream literature towards developing a conceptual framework for the study of disaster resilience leadership.

Leaders and Leadership

Interest in leadership is often confused with interest in leaders. We are interested in the lives and personal habits of those who attract our attention. We spend a lot

of time and energy trying to gather trivial details about their day-to-day activities. As a result of this obsession, "we know all too much about our leaders, we know far too little about leadership" (Burns, 1978, p. 1). A multitude of data about the individual lives of leaders also provides us with confusing and, often, contradictory evidence of their behaviour. It is not difficult to find two successful individuals who behave in dramatically opposite fashions when faced with a similar situation. If our focus is on the life and actions of leaders, we tend to craft our understandings of leadership solely based on the actions of individuals who have attracted our attention. This has been the reason for a lot of confusion and clutter not just in leadership theory but also in practice.

Our native conception of leadership, also known as an implicit theory of leadership, is often drawn from our observation of the lives of famous people whom we admire. To reduce cognitive load, individuals create cognitive categories of leader and non-leader (Lord et al., 1984). Further, the category of a leader is endowed with several characteristics which serve as markers of leadership (Keller, 1999). Despite demographic similarities, individuals may have drastically varying implicit theories of leadership depending on their personalities, role models, and life experiences (Hall & Lord, 1995; Hunt et al., 1990; Keller, 1999). In other words, two individuals in the same team may have a distinctively different understanding of the qualities and behaviours associated with being a good leader. In practice, this means that there may be serious disagreements on what constitutes good leadership even amongst individuals who have worked together for many years. Theoretically, the effect of focus on leaders and the implicit leadership theories extracted out of their life experiences have led to a proliferation of leadership theories modelled on the actions of prominent individuals, which may or may not have relevance in different contexts.

If we shift our focus to leadership (instead of individual leaders), by looking at it as a "structure of action that engages persons" to bring about "actual social change measured by intent and by the satisfaction of human needs and expectations" (Burns, 1978, p. 3), we may find something of theoretical and practical interest. In other words, instead of looking at leadership merely as a list of qualities and behaviours of prominent individuals (role models), we focus on the process by which individuals and groups engage with each other to willingly and collectively strive for desirable change in their circumstances.

As we move our focus to understanding the process of leadership, we note that the quality of leadership achieved varies as one individual (the potential leader) interacts with different individuals (the potential followers) across varying contexts. The same individual acting consistently may have a different impact on different members of his or her audience. Similarly, while we may be inspired by the actions of an individual in a particular context, the same individual in another context may have the opposite effect. Expecting any one individual to consistently demonstrate leadership in all circumstances is unrealistic.

The best way to understand leadership is to look at it as a relationship. Any relationship occurs when two individuals interact in a particular context. Hence, we

define leadership as a relationship in which one individual (the leader) influences another (the team member) to willingly work towards a joint purpose (Burns, 1978). To correctly understand the process of leadership, it is essential to account for the patterns of engagement of individuals in a particular context.

Burns's (1978) conceptualisation of leadership, as a relationship characterised by one individual influencing another to work willingly towards a joint purpose, had important implications for theory and practice. First, we recognised the dynamic nature of the leadership relationship. When individuals engage willingly for a joint purpose, leadership exists. However, when the relationship is one of brute power or coercion, though the individuals may engage to produce outcomes, leadership is absent. Similarly, when an individual who once engaged team members in purposeful collective action now chooses to remain passive, we know that the leadership relationship has ended. Recognising this dynamism with respect to time and context is essential for understanding leadership. Failure to recognise the dynamic nature of leadership as a relationship leads us to commit a travesty of combining all the actions of powerful men and women (even those that include brute power, coercion, neglect, and apathy) as leadership.

Second, by uncoupling leadership from the persona of the leader, we do not restrict ourselves only to describing the actions of those occupying positions of power. Instead, we can study the actions and impact of several other agents who continually strive to engage others in purposeful action for bringing change. It is this understanding that guides us to look at ways of understanding leadership beyond the individual.

Leadership beyond the Individual

Collectivist leadership approaches involve multiple individuals taking on formal and informal leadership roles (Yammarino et al., 2012). These approaches go beyond one individual having formal authority. The term 'leadership' in most of these approaches surpasses Burns's (1978) definition, to include influencing others to work willingly towards not just a joint purpose but also the tasks conventionally associated with an individual having formal authority in a group, such as planning tasks for others and securing resources for the group. These roles are expressed across several levels of analysis, including within dyads, within and across teams, within and across departments, and within and across organisations. Some of the most common collectivist leadership approaches are shared or collective leadership, network leadership, complexity leadership, and team leadership (Yammarino et al., 2012). We briefly describe each of these.

Shared or Collective Leadership

Shared leadership is a team characteristic wherein the roles or functions conventionally ascribed to a leader are distributed among team members and accomplished collectively by several individuals rather than a single designated leader

(Carson et al., 2007). Hence, decisions and actions made by the team are an outcome of the team's social dynamics, not the result of a single leader (Gronn, 2002). Here, leadership is a shared responsibility among team members (Yammarino et al., 2012).

Teams characterised by shared leadership can be described by using three patterns of cooperative action: spontaneous collaboration, intuitive working relations, and institutionalised practices (Gronn, 2002). Two factors are found to facilitate the emergence of shared leadership, namely internal team environment, consisting of shared purpose, social support, voice, and external coaching (Carson et al., 2007).

Similar to shared leadership, collective leadership suggests the distribution of the leadership role such that information or specialised knowledge available with individuals in the group may be selectively called upon and utilised as per the demands of the situation (Friedrich et al., 2009).

Network Leadership

Networks can be seen "as both cognitive structures in the minds of organizational members, and opportunity structures that facilitate and constrain action" (Balkundi & Kilduff, 2006, p. 419). Network leadership provides an understanding of the social context within which leadership emerges by assessing four levels of networks. These are the focal individual's social cognition, personal network, position within the organisational network, and position within external networks (Balkundi & Kilduff, 2006). It is from this relatively stable network of social exchanges that leadership is assumed to emerge (Yammarino et al., 2012). Moreover, leadership effectiveness is a function of not just the leader's cognition of the network but the structure of interpersonal, intra-organisational, and inter-organisational ties within which he or she is embedded (Balkundi & Kilduff, 2006).

Since network ties are channels for the flow of interpersonal resources, teams with better interpersonal ties are more committed and achieve more. Teams with leaders who are more central in the team's network and teams which are central in their intergroup network perform better (Balkundi & Harrison, 2006).

Complexity Leadership

This theory is built on the concept of relational leadership, a process of social influence through which emergent patterns of coordination and change are constructed in dynamic leader—follower dyads (Uhl-Bien, 2006). Interdependent agents—bound by common goals—interact across dynamic, open systems of connections to form complex adaptive systems (Uhl-Bien et al., 2007). Leadership is, thus, an emergent property of a complex adaptive system, based on relationships and interactions that occur in the spaces between individuals (Lichtenstein et al., 2006). Complexity leadership theory seeks to identify and explore strategies and behaviours that foster organisational and sub-unit creativity, learning, and adaptability.

The primary focus here is on mechanisms and contexts enabling change, rather than on variables (Uhl-Bien et al., 2007).

Team Leadership

The central idea of this concept is that team processes influence team leadership via individuals enacting leadership roles that are shared and distributed among team members (Yammarino et al., 2012). The fundamental premise here is that leadership is not just an input of team processes but also an outcome of team processes. Teams that consciously seek to learn and develop may build their leadership capacity while accomplishing tasks in a shared manner (Fallesen, 2004). In other words, when faced with complex adaptive challenges, processes, such as teamwork and team learning, may provide the resources for better team adaptation and performance in subsequent performance cycles (Day et al., 2004). The concept of team leadership is extended to explain leadership processes in multi-team systems (Mathieu et al., 2001), which are particularly suited to non-routine, unpredictable, and dynamic events with high levels of interdependence within and across multiple teams (DeChurch et al., 2011).

Leadership beyond Organisational Boundaries

At times, several teams function together in a system. Even though individual teams may pursue their own immediate and proximal goals, the system of multiple teams may have at least one common long-term or distal goal which becomes the basis for their interdependence. These networks of interdependent teams are called multi-team systems (MTSs). These are defined as "two or more teams that interface directly and interdependently in response to environmental contingencies toward the accomplishment of collective goals" (Mathieu et al., 2001, p. 289).

MTSs are often formed in response to sudden events, in order to deal with rapidly changing circumstances, such as disaster response teams, and they may either be within one organisation or exist across several organisations (Zaccaro et al., 2020). In the MTSs, there is a sequencing of activities within and across teams such that immediate team goals contribute interdependently to fulfil at least one large goal of the MTSs, the achievement of which determines the performance of the MTSs (Mathieu et al., 2001).

MTS research has increased rapidly since 2015, growing from an average of 2.9 empirical papers a year to an average of 14 empirical papers a year (Zaccaro et al., 2020). The research spans a range of disciplines, such as psychology, organisational behaviour, human factors, communication, and medicine (Shuffler et al., 2015). The leadership functions in MTS comprise strategising and coordinating (DeChurch & Marks, 2006), and these may either be multilevel and vertical, or shared, or collective, or a combination of these (Zaccaro et al., 2020).

Organisations Demonstrating Leadership within a Network of Organisations

Conventional definitions of leadership explicate the concept at an individual or group level of analysis. However, if we wish to conceptualise interactions among organisations, we need to look at how clusters or networks of organisations interact with each other. A network of organisations, linked to each other for the flow of products, services, finances, and information, constitute a supply chain. In this macro inter-organisational context also, there are leader-follower relationships. The primary task of leadership, in this context, would be to coordinate the efforts of multiple organisations in the supply chain to enable the effective functioning of the same (Bowersox & Closs, 1996; Lambert et al., 1998).

Conventionally, leadership in the supply chain was defined as being the most powerful or dominant organisation in the set of organisations forming the supply chain (Maloni & Benton, 2000). Building on the theory of transformational leadership (Burns, 1978), Defee (2007) conceptualised supply chain leadership as "the ability of one organization in a supply chain to exert influence over other member organizations to increase supply chain follower compliance and commitment to the leader's vision for the entire supply chain" (Defee, 2007, p. 2). This definition was later expanded to define supply chain leadership as the behaviour of an organisation to influence and orchestrate the actions and behaviours of its supply chain partners (Mokhtar et al., 2019). Similarly, Shin and Park (2021) conceptualised supply chain leadership using a leader-member exchange perspective and showed how it could enhance supply chain resilience

In recent years, though leadership seems to have gained a lot of significance in the context of global environmental crisis and change, it remains a neglected field of inquiry, especially in the context of disasters. Drawing from the earlier literature, the study of disaster resilience leadership makes a conscious attempt to shift the focus of exploration beyond individual and organisational boundaries, and encompass many organisations and large social systems.

Leadership in the Extreme Context of Crisis, Emergency, and Disasters

In the earlier section, we saw that the study of leadership progressed from a focus on the individual personality of the leader to include followers and the context. The expansion of the unit of analysis for understanding leadership included teams, organisations, and even large organisation systems.

This section focuses on the etymological origin, the extreme contexts, and the leadership dimensions explored in leadership literature, to identify the unique attributes to be explored in the study of disaster resilience leadership. Like in the earlier section, here, too, we extend our understanding of leadership beyond the individual to that of collectives, multi-team systems, and multisystem inter-organisational leadership. Thus, this study on disaster resilience leadership

incorporates not just the individual actors but also collectives, organisations, and institutions as key actors, and explores the actions of these actors in relation to each other, embedded within the context of disasters.

Etymological Origin

The literature on corporate or organisation-based leadership in extreme contexts has foregrounded crisis leadership and laid the foundation for studying disaster leadership. The disproportionate increase in extreme events and recognition of the fact that effective responses are hampered by the lack of, or poor, leadership has further contributed to the surge in leadership research in extreme contexts. However, given the etymological origins of crisis management, a major portion of the existing leadership literature focuses on the individual leader within an emergency context, such as trauma organisations (hospital emergency rooms, ambulance emergency rooms, etc.), critical action organisations (fire, search and rescue, or disaster response teams, military combat units), and high-reliability organisations (routine police and fire operations, disease control organisations, nuclear power plant safety operations teams) (Hannah et al., 2009). Although the concept of crisis was differentiated from that of disasters, conceived as ill-managed crises with negative outcomes, the two terms continue to be used interchangeably in leadership literature. Therefore, we need to take a closer look at the extreme contexts in which leadership has been explored to date, to identify the settings appropriate for the exploration of disaster resilience leadership in the Indian context.

The Extreme Contexts that Inform Disaster Leadership Literature

Leadership in extreme contexts has been an area of research interest across disciplines like sociology, geology, public administration, international relations, political science, and political psychology and also among technical specialists like epidemiologists and information technology experts. This multidisciplinary interest varied from crises to emergencies, disasters, extreme events, catastrophes, and complex emergencies, without much consensus over the definitions of and distinctions between these terminologies. Since clarity of concepts and their definitions are essential for building on previous research to advance disciplinary knowledge, we re-examine the terminologies used in the leadership literature in extreme contexts towards an exploration of disaster resilience leadership.

Over the years, disasters have evolved as a separate stream in the study of disruptions, largely within the disciplinary boundaries of sociology and geology. It has distinguished itself from crisis and emergency management, a subject of interest to several other disciplines mentioned earlier. The term ‘disaster’, much like ‘resilience’, too, was heavily contested. Yet traditionally, there has been a common minimum agreement regarding the focus on severe disruption of life-sustaining functions of the human system, typically a community or geographically connected

set of communities, causing significant distress to people (Rosenthal, 1998). Whereas crisis, according to Hewitt (1983), is a catch-all concept that includes all types of 'un-ness' events like unwanted, unexpected, unprecedented, and almost unmanageable, causing widespread disbelief and uncertainty (Rosenthal et al., 2001; Stern & Sundelius, 2002). A more precise definition of 'crisis' is "a serious threat to the basic structures or the fundamental norms of a social system, which under pressure and highly uncertain circumstances necessitates making critical decisions" (Rosenthal et al., 1989, p. 10). Crisis management, as a field of study and practice like leadership, has evolved within an organisational context, in response to the threats to a system's basic structures or values that need to be dealt with urgently and under conditions of uncertainty and inconceivability (Rosenthal et al., 1989).

Another related term is 'extreme context', which differs from crisis in three ways. First, while a crisis threatens the achievement of an important goal, an extreme context is one in which goals such as life or safety are threatened. Second, while in a crisis, the lack of response time is a defining characteristic, it is not a pre-requisite for an extreme context. Third, while a crisis is often ambiguous, with an unknown cause or solution, that need not be the case in an extreme context (Hannah et al., 2009).

Traditionally, crisis and emergency management have been understood from within the purview of a single organisation, whereas disaster management invariably meant the convergence of multiple organisations. In contrast, conceptually and in practice, emergencies or routine extreme events are differentiated from crisis and disasters with regard to their high probability, certainty, and availability of response time (Hannah et al., 2009). We see that the research literature on leadership in extreme contexts appears to be all mixed up, especially dominated by the study of leadership in an emergency context. Drawing from the earlier literature, the exploration of disaster resilience leadership will not only have to push its boundaries beyond the individual and organisation but also factor in uncertainty as a key dimension in the exploration of disaster resilience leadership. Since a major portion of leadership literature in extreme contexts is focused on the individual leader within the boundaries of organisations handling routine crisis, the understanding emerging from the same is not fully relevant in exploring disaster resilience leadership, as disaster management invariably means the convergence of multiple organisations in a context of uncertainty.

However, with the changing nature of contemporary disasters and crises, the traditional boundaries between concepts are further blurring and possibilities of learning from across the disciplinary boundaries are emerging. Crisis is, now, being proposed by scholars as an overarching category, with emergencies conceived as routine crisis and disasters and catastrophes as crisis with bad and intolerable outcomes to human systems (Rosenthal, 1998). Thus, there is still scope for drawing from the larger pool of available literature specifically in the area of leadership for crisis, extreme events, extreme contexts, and emergencies. The traditional crisis leadership literature is characterised by the exploration of intra-organisation time-bound crisis management exercises or that of emergency management of routine

crises, which has a common element of urgency to respond. Thus, the urgency to respond along with uncertainty have been the key dimensions of leadership explorations in crisis, emergency, or disaster management that differentiates it from routine leadership practices.

However, in contemporary crisis and disaster management circles, there has been a realisation that the time-bound event-centric focus is limited, and there is a need to move away from it. This perspective is not alien to the disaster management conceptualisation, widely recognised since the introduction of the disaster management cycle, though this recognition does not extend very much to the field of practice. In the context of crisis management, however, the focus on preparedness (Boin et al., 2016; McConnel & Drennan, 2006; Stern, 2013), the adaptive phase (Heifetz et al., 2009), and reforms imperative (Boin & Hart, 2000, 2003) beyond the time-bound emergency phase, and its crisis management imperative to minimise the damage, alleviate the pain, and restore order, are emerging themes yet to gain the attention of researchers. This explains the significant gap in our understanding of leadership in these phases, typically not characterised by the urgency to respond, both within the disaster and crisis management literature.

There is, thus, a significant gap in the understanding of leadership in the pre- and post-event phases of mitigation, and long-term response and recovery. Leadership in these phases of disaster management is difficult as high stakes and uncertainty remain albeit in a context of a diminished sense of urgency among all stakeholders. Therefore, in this study of disaster resilience leadership, we focus on leadership in the context of mitigation and recovery initiatives, characterised by high stakes, uncertainty, and a diminished sense of urgency. Though the preparedness phase also shares some of the earlier characteristics, the same has not been included as they are predominantly event-centric and entail very limited scope for systemic and socio-structural transformative change.

The blurring of boundaries between routine and non-routine crises, between escalating processes of crisis and disasters, and the unique and dynamic characteristics of the factors that create contingencies, necessitate improvisation and new styles and approaches to leadership even in the emergency response phase (Hannah et al., 2009). Contingencies also have the potential to alter the relationships between constructs in extant theories of leadership, necessitating the need for ongoing explorations of leadership in an emergency context. Moreover, though there is an emphasis on sustainable relief and reforms, even in emergency situations, practice often suffers in the wake of urgency. This shows the need for more focused attention on disaster resilience leadership in the emergency preparedness and response phase. While the focus on disaster resilience leadership during the preparedness and emergency response phase of a disaster is equally pertinent, we prioritise the requirement for new leadership practices in contexts with a diminished sense of urgency but with high stakes and uncertainty for the following reasons: (i) there is a complete absence of leadership literature that goes beyond the emergency context; (ii) mitigation and long-term response and recovery initiatives extend a larger scope for studying transformative disaster resilience practices that

also align with the reform imperative of crisis management; and (iii) there is a need to do justice to the vast variety of initiatives, topography, hazards, and actors that characterise the Indian context.

Since a major portion of leadership literature in extreme contexts is focused on the individual leader within the boundaries of organisations handling routine crisis, the individual-centric leadership frameworks and approaches that currently inform the study of leadership are not fully relevant in exploring disaster resilience leadership, as disaster management invariably meant the convergence of multiple organisations, in a situation of uncertainty. The section that follows explores the emerging governance frameworks that emphasise convergence and integration of multiple actors from multiple sectors at multiple levels.

Integrated Frameworks for Studying Disaster Leadership

The recent recognition of the need for convergence and integrated governance models for addressing global environmental challenges led to a range of new governance frameworks and associated leadership formulations, such as adaptive leadership (Heifetz, Heifetz, et al., 2009), transitional leadership (Aguirre & Martinez, 2002), transformational leadership (Bass, 1985), collaborative leadership (Chrislip, 2002), network leadership (Cullen-Lester & Yammarino, 2016), inter-organisational leadership (Connelly, 2007), and integrative public leadership (Morse, 2010). These leadership styles and frameworks are largely discussed at the intersection of climate change, disaster risk reduction, and sustainable development goals, and are primarily limited to the scientific and policy arenas (Crosweller & Tschakert, 2020).

There is limited literature that empirically explores these integrated forms of leadership (limited to a collective, distributed, or shared leadership) in real-life practice. There is also an increasing criticism of these governance/management frameworks and the related leadership typologies as technologies of neoliberal governance that appropriate the core essence of socio-structural transformation inherent in the concept of resilience (Davoudi et al., 2019).

We examine real-life practices of leadership in the Indian context to understand the relevance, appropriateness, and prerequisites of these new frameworks to bring about systemic and socio-structural transformative change towards building disaster resilience in the Indian setting. However, the study does not align with a particular framework or theory, as the styles and types of leadership are largely individual-centric and need to be customised to inform the leadership of collectives and organisations. Moreover, there is increasing evidence to show that multiple leadership styles and types are used by the same leader depending on the changing situation and context.

Values Guiding Disaster Leadership

Leadership, against the backdrop of increasing and ongoing crises and extreme events, can never be the same anymore, even within an organisational context of crisis management. Leadership challenges have significantly mounted with

increasing disaster intensity and frequency. The very act of repeatedly preparing and responding to escalating disaster intensities and frequency not only requires additional leadership qualities but also challenges the core value systems in which crisis and disaster leadership are rooted. Leaders are not only required to prevent, prepare, and respond to disasters but also rationalise avoidable and unavoidable losses whilst protecting their most vulnerable constituencies.

Optimisation of these multiple priorities often results in contradictions. Leaders are faced with several such ethical dilemmas in the context of disasters and extreme events. Let us take a look at a few such predicaments. Every disaster challenges the legitimacy of social entities and their leader's capability—entrusted with the task of managing risks—whilst operating in a context of ever-increasing frequency and intensity of disasters. Leaders are expected to foresee and manage disasters that have increased in frequency, intensity, and complexity, within a constrained context shaped by neoliberal and market philosophies that demand resilient citizens and put the responsibility of managing the same on individual citizens. Though the neoliberal hierarchical paradigm of resilience programming has facilitated more bottom-up approaches, power, justice, and equity continue to be state prerogatives, resulting in institutional void and ambiguity in leadership responsibility. Finally, vested interests led senior decision makers and disaster risk managers into inaction, while the demands for more efficient and effective leadership at the operational level mounts (Crosweller & Tschakert, 2020).

The challenges and dilemmas increase manifold when one considers the macro context in which current disasters are embedded. The fallouts of modernity, risk society, neoliberalism, governmentality, and vested interest made the leadership challenge worse by contributing to the global manufacturing of risk and lack of control, shift in responsibility from institutions to individuals, global standardisation and facilitation of influence by actors external to localised social relations, dis-embedding of social relations onto larger global social institutions, absence of decisive leadership, inaction, and institutional void, among others.

Crosweller and Tschakert (2020) conceptualise the leadership dilemmas emerging from the contradictions of having to protect citizens and master disasters, within the macro context of uncertainty and risk created by the confluence of modernity, risk society, neoliberalism, and governmentality. They highlight the inadequacy of the existing ethical framework to handle disaster leadership dilemmas and emphasise the need to draw from the conceptualisation of ethics in the fields of relational leadership, feminist care, and compassion ethics. Yet another unique feature that emerges from the study of leadership in extreme contexts as opposed to routine corporate leadership is that of questions of public good, values, and ethics.

As resilience programming is extensively critiqued for negating vulnerability and ignoring issues of equality and justice, we review the literature on servant leadership (Greenleaf, 1977), authentic leadership (Craig et al., 2015), transformative authentic leadership (Nichols, 2008), ethical leadership (Brown et al., 2005), and integrative public leadership (Morse, 2010) to explain the value framework suitable for the study of disaster resilience leadership. Concepts, such as trust,

authenticity, common good, public interest, and public values, have been studied in relation to leadership within these frameworks. For example, servant leadership prioritises the follower's welfare before other goals. It prioritises and enables the growth and development of followers, which often results in the emergence of future servants/leaders from among the followers themselves (Greenleaf, 1977). On similar lines, transformational leadership, put forth by Burns (1978) in opposition to transactional leadership, too, emphasised the long-term relationship and commitment between actors and the concern for the needs and well-being of followers. Bass (1985) foregrounded the social exchange process involved in transformational leadership and differentiated it from the economic exchange in transactional leadership. Though reflection on values is evident even in the early conceptions of leadership, it has gained prominence in the exploration of leadership in extreme contexts.

The limited literature on authentic leadership, authentic transformational leadership, and ethics of leadership in disasters and climate change have emerged in recent years. Authentic leadership builds on the trust element that the follower has in the leader and the belief in the purpose that the organisation puts forth (Craig et al., 2015). Authentic leadership is seen to be in alignment with transformational leadership, as scholars emphasise the necessity to be authentic in order to be viewed as transformative (Avolio & Gardner, 2005; Bass, 1985; Burns, 1978), and the two have been brought together in the conception of authentic transformational leadership (Nichols, 2008). Relational leadership ethics conceives leadership in the context of emerging social reality and considers the two to be inseparable (Crosweller & Tschakert, 2020). It detests the standardising functions of modernity and global frameworks in understanding leadership. Drawing from relational leadership ethics, feminist ethics, and the philosophy and ethics of compassion, Crosweller and Tschakert (2020) conceptualise the vision of leadership as follows:

> such leadership envisions communities as spaces in which everyone is genuinely supported, through a more equitable distribution of power, wealth, resources, and knowledge (indigenous and vernacular knowledge), to achieve self and community affirmation and mobilization in the face of disasters, whether they arise from climate influenced hazards or from making of our flawed humanity.
>
> *(p. 12)*

The extensive critique of resilience has created possibilities for ethical leadership that demands decisive action and support for citizens before they are harmed. It requires leaders to be compassionate, responsible, and justice driven (Crosweller & Tschakert, 2020).

The emphasis on public value, common good, and public interest emerges from the literature on public leadership, public entrepreneurship, and integrative public

leadership. Most of these frameworks trace their etymology to public administration, gaining attention with the growing emphasis on integrated and holistic governance frameworks especially in the context of the global environmental change crisis. With the shift from an industrial society to a knowledge society, there has been a change from traditional hierarchically oriented governance to that of the market (new public management framework) and network-oriented governance. Within the current network-oriented governance frameworks, the integration of multiple stakeholders (actors and organisations), ideas, visions, purpose, knowledge, abilities, perspectives, resources, and practices have been given prominence in order to create public value. Integrative public leadership emerges from the network-oriented governance framework and "is a process of developing partnerships across organizational, sectoral and/or jurisdictional boundaries that create public value" (Morse, 2010, p. 231). It is considered a catalyst for the successful integration of various stakeholders.

The public in integrative public leadership refers to the desired outcome of public value, used interchangeably with common good and public interest. Integrative public leadership attempts to solve or mitigate public problems, create or improve public service, and respond to public sentiments, with a focus on public interest or common good. This means that it is not about meeting private ends or about the public sector co-opting other actors to achieve organisational goals. Integrative public leadership is conceived to create new possibilities by bringing together multiple actors across different boundaries (organisational, jurisdictional, sectoral, interpersonal) and embodying varied ideologies and lived experiences to work around a collective idea, emerging from the integration of differences into a shared understanding and common purpose (Morse, 2010). Huxham and Vangen (2005) highlight the limitations of mainstream leadership theories in the context of studying collaborations. By focusing on structures, processes, and participants, the integrative public leadership's approach to leadership for collaboration is to look at "what makes things happen in a collaboration" (p. 202).

All the earlier frameworks are concerned with benefiting those who are most marginalised in society or at least not putting them at a disadvantage and, thus, align well with the value framework of disaster resilience identified earlier. Drawing from the earlier frameworks, we take forward the values of social justice and public good in the study of disaster resilience leadership. We have selected a range of case studies for this book, keeping in view the criterion of the public good dimension. This study also explores the various dimensions of such spheres as integrative public leadership—structures, processes, participants, and social justice. As leadership is inseparable from the emerging social reality, the study grounds the exploration of the phenomenon in the immediate context of the actors and that of the macro circumstances as reflected in the proximate social experiences. Structural inequality and injustice are also investigated as part of the inquiry on leadership capacity and practices of envisioning a just space, which pays adequate attention to the material conditions of vulnerability.

Operationalising the Definition of Leadership

Drawing from the existing literature on leadership and the multiplicity of definitions, we identify two elements of good leadership, relational and functional (Antonakis & House, 2014). The relational aspects of leadership focus on the socio-emotional effects of the leader on the group while the functional aspects of leadership emphasise the use of the leader's expert knowledge to ensure the attainment of group goals (Antonakis & House, 2014). The relational dimension of leadership aligns well with the value framework within which we would like to explore disaster resilience leadership.

We draw from one of the earlier definitions of 'leadership' by Burns (1978) grounded in the relational perspective, as follows: 'leadership' is defined as a relationship in which one individual (the leader) influences another (the follower) to willingly work towards a joint purpose. In this definition, there are three important elements. First, by defining leadership as a kind of relationship, we recognise that leadership occurs at the intersection of three elements, namely, the leader, the follower, and the context. The same individual may not inspire everyone, and one individual may not be successful in a different scenario. Hence, it is a combination of the leader, the follower, and the context, which enables the emergence of the leadership relationship. Second, there is an emphasis on the followers working willingly. This means that followers are not coerced and have real choices as to whether they wish to follow the leader or not. Third, the term 'joint purpose' recognises that the result of the relationship is the leader and followers working towards a common or joint purpose. Drawing from the literature review presented earlier, in disaster leadership and resilience, we add the dimension of values and extend the focus beyond the individual and the boundaries of a single organisation.

Thus, drawing from the classical definition of 'leadership' and the recent trends in the leadership discourse in extreme contexts, with regard to the focus beyond an individual and the organisational boundaries, we define 'leadership' in the exploration of disaster resilience leadership as follows: 'Leadership' is defined as the process by which individuals, groups, organisations or institutions use their expertise and resources to evolve, identify, and implement socially and environmentally just solutions to meet the social and material needs of the community or society by engaging the expertise, efforts, and willing cooperation of other individuals, groups, networks, organisations, or institutions within and outside their organisational boundaries.

It focuses on the influencing process engaged with by individuals with/without a formal position, collectives, associations, NGOs, and special disaster management organisations and institutions, with the goal of reducing disaster risk (inclusive of the risk of exposure, negative outcomes, not recovering and not bouncing back better) towards building disaster resilience in the Indian context. The study explores leadership among individuals, associations, collectives, single organisations, and institutions to explore and understand the unique contribution (motives, roles, contexts, challenges, barriers, opportunities, networks, processes, structures,

participants, value frameworks, strengths, dynamics, and strategies, among others) that each actor puts forth towards building disaster resilience.

Conceptual Framework of Disaster Resilience Leadership

In summary, the role of leadership in the field of disaster management has been recognised by many researchers, particularly in disaster and emergency management (Bass, 1985; Marcus et al., 2006). While a vast amount of literature encapsulates the concept of leadership in the field, there is a dearth of literature specifically on resilience. The scholarship largely focuses on the traits of a leader and types of leadership, with the majority focusing on advocating the transformational and charismatic leadership during a crisis and emergency (Norman & Binka, 2015), and the need to strengthen leadership skills and capacities of stakeholders involved in the operationalising of disaster risk reduction, crisis, emergency, and disaster mitigation interventions (Hunt et al., 1999; Trice & Beyer, 1986).

Since leadership is contextualised differently in each phase of the disaster, and since "differing mixes of such leadership may also be required across time" (Hannah et al., 2009, p. 913), we do not align with any particular leadership style, approach, or model. However, we bring together the key dimensions identified to be significant in the exploration of leadership for disaster resilience from the literature surveyed here, as presented in the frameworks given earlier.

The conceptual framework of the study (see Figure 1.1) envisages sustainable solutions for the challenges posed by the global environmental crisis, emphasising the need for the phenomenon of disaster resilience leadership. Disaster risk and the initiatives for building resilience to disasters, explored in the study, are positioned within the context of macrosocial processes including modernisation, risk society, liberalisation, and globalisation. These processes have a strong bearing on leadership practices, when juxtaposed with the dilemma that leaders face while managing disasters. Recognising the significance of coordination and collaboration between various actors, the study includes a multitude of actors across different boundaries (administrative, geographical, and interpersonal). It covers initiatives by individuals both formal and informal actors, civil society, and institutions for the benefit of society, shaped around a shared vision intertwined with values of public good and social and environmental justice in an integrated collective approach. The resulting systemic and structural changes emerging from the leadership practices are indicative of the transformative and sustainable solution to managing disasters and building resilience.

Selection of Case Studies

The case studies documented and analysed here have been selected after a review of various initiatives implemented across the country. This included a prior sampling of states to select representative samples from the country. The two-step

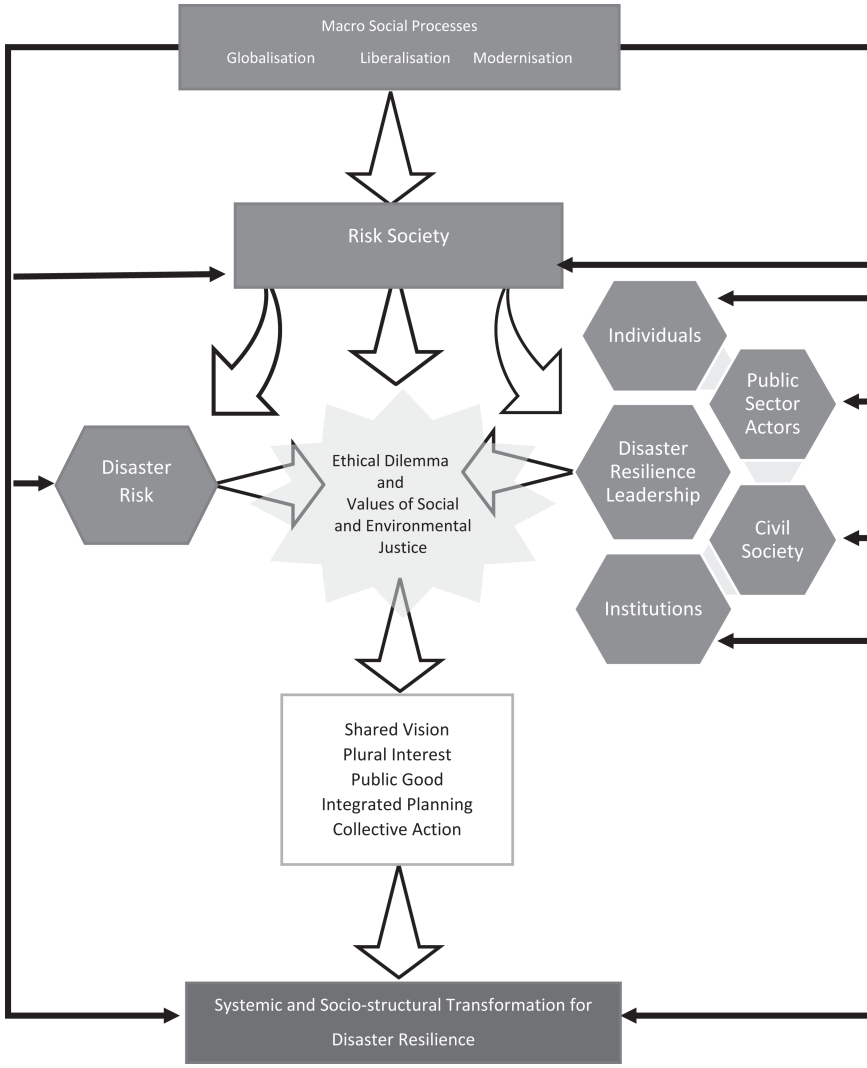


FIGURE 1.1 Conceptual Framework for Disaster Resilience Leadership

process (Figure 1.2) comprises risk profiling of the states on the basis of their hazard exposure and socio-economic vulnerability, and clustering of the states on the basis of their risk profile. K-Means Clustering algorithm has been used for deriving the clusters of states that range from low to highly vulnerable states. Finally, 18 states have been selected from these clusters (Table 1.2) that represent the various ecoregions of the country. Some states have been excluded from the in-depth review of the initiatives due to the unavailability of relevant secondary data. However, the exclusion has been in cognisance of not compromising diversity

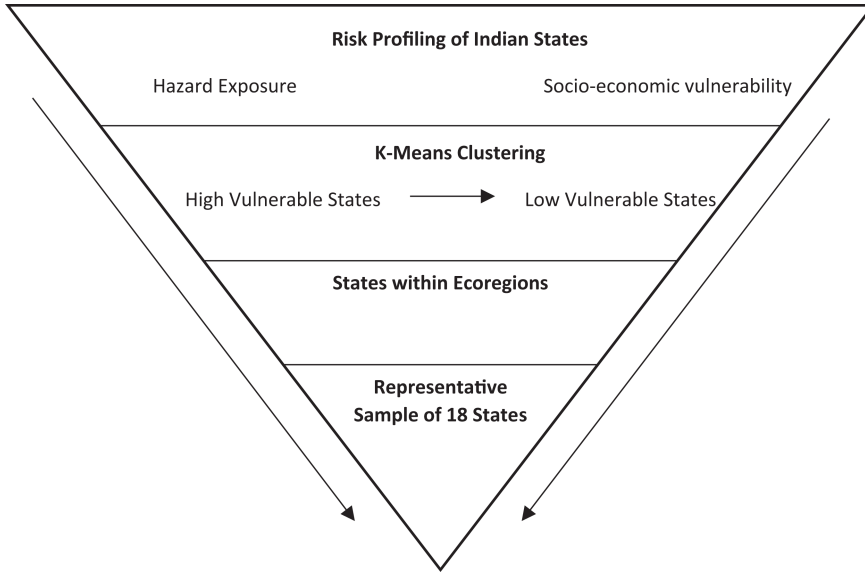


FIGURE 1.2 Steps for Selection of Case Studies

TABLE 1.2 Selected States

States	*Ecoregions*	*K-Means Cluster-2*	
K-Means Cluster-1		Haryana	hot arid, hot semi-arid
Andaman and Nicobar Island	Island	Lakshadweep	island
Andhra Pradesh	hot arid, hot semi-arid, coastal	NCT of Delhi	hot semi-arid
Arunachal Pradesh	warm per humid	Punjab	hot arid, hot semi-arid
Assam	hot moist, subhumid	Uttar Pradesh	hot subhumid
Chhattisgarh	hot, subhumid	West Bengal	hot subhumid, warm per humid, coastal
Dadra and Nagar Haveli	hot humid per humid	K-Means Cluster-3	
Goa	hot humid per humid	Bihar	hot subhumid
Gujarat	hot arid, hot semi-arid, coastal	Chandigarh	hot semi-arid
Himachal Pradesh	warm subhumid	Daman and Diu	hot humid per humid, coastal

(*Continued*)

TABLE 1.2 (Continued)

States	*Ecoregions*	*K-Means Cluster-2*	
Jammu and Kashmir*	cold arid, warm subhumid	Puducherry	hot subhumid, coastal
Jharkhand	hot subhumid		
Karnataka	hot arid, hot semi-arid		
Kerala	hot semi-arid, coastal		
Madhya Pradesh	hot semi-arid, hot subhumid		
Maharashtra	hot semi-arid, hot subhumid, coastal		
Manipur	warm per humid		
Meghalaya	warm per humid		
Mizoram	warm per humid		
Nagaland	warm per humid		
Odisha	hot subhumid, coastal		
Rajasthan	hot arid, hot semi-arid		
Sikkim	warm per humid		
Tamil Nadu	hot semi-arid, hot subhumid, coastal		
Tripura	warm per humid		
Uttarakhand	warm per humid		

*States selected as the representative sample for the study are highlighted

*Telangana has been excluded due to unavailability of long-term data

*Jammu and Kashmir include the Ladakh union territory, as the data has been collected prior to the division of the state

concerning topography, risks, and vulnerability. A secondary literature/data review has then been undertaken to develop an exhaustive list of initiatives, based on the risk profile of the states, triggers of the initiatives, and outcomes of the activities undertaken. This included an online search of reports, journal articles, websites, and knowledge-sharing portals and publications to identify the actors that have led the responses for bringing social and structural changes.

An illustrative set of 76 initiatives across the country had been identified from these 18 states, with relevant information available for the selection of a final set of case studies towards in-depth exploration for documentation and analysis. The review helped in establishing an overview of the nature of initiatives catering to various disasters and implemented by a range of actors. Of the 76 interventions, a majority of initiatives reviewed were initiated by civil society organisations/NGOs (36 initiatives) followed by government-led interventions (19 initiatives). Ten interventions were institution-led, while 11 by individuals. The following

section summarises key features observed from the review of the case studies (Figure 1.3).

The initiatives undertaken in the hilly regions of Uttarakhand, Himachal Pradesh, Jammu and Kashmir, Ladakh, and the Northeastern states are dominated by response, rehabilitation, and preparedness. Owing to the region's vulnerability to flash floods, earthquakes, cloud burst, and resultant landslides, action is focused on post-disaster revival of livelihoods, natural resource rejuvenation, and building capacities for adaptation and disaster risk reduction. The initiatives are conceptualised and implemented, predominantly by civil society organisations and public sector actors.

The north and central semi-arid regions, comprising Punjab, Madhya Pradesh, and Chhattisgarh, face water crises due to drought or drought-like conditions. The crises are also a result of the exploitation of water resources, especially to meet agricultural demands. Therefore, the interventions largely focus on water management through resource conservation and rejuvenation. These mitigation activities are taken up by both formal and informal actors, including communities, civil society organisations, and government agencies.

Drought-prone regions of the country have witnessed actions from a range of actors, aimed at drought mitigation. These agriculture-dependent regions with water scarcity face livelihood insecurity and are dominated by soil and water conservation interventions. Livelihood generation, water management, and capacity-building programmes are also implemented to build the resilience of the communities to extreme rainfall events. For the northern plains of Bihar and Uttar Pradesh that are prone to floods and drought, several interventions have been made by state and non-state actors, including civil society, private agencies, and

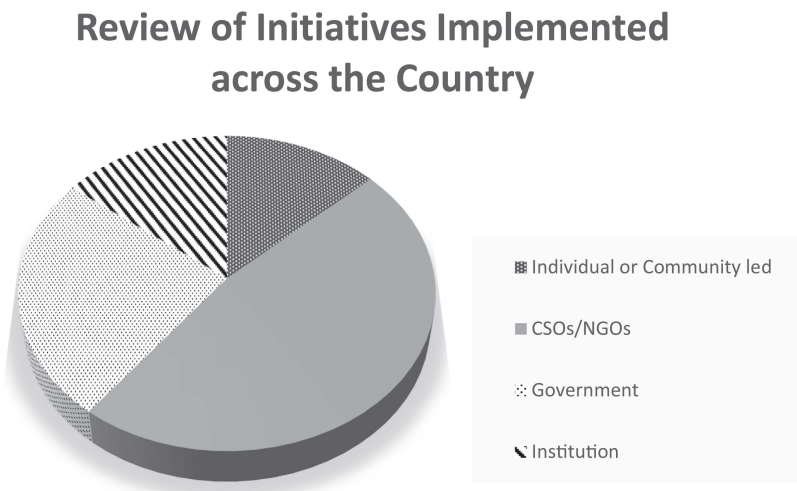


FIGURE 1.3 Types of Actors Emerging from Review of the Initiatives

communities. These range from livelihood regeneration, watershed management, installing early warning systems for floods, emergency, and psychosocial support.

Measures in the cyclone-prone states are dominated by state-led responses for rescue, relief, and rehabilitation post the disaster. Certain interventions towards risk reduction, such as tree walls, afforestation, and livelihood regeneration, have also been undertaken by the state, civil society organisations, as well as communities themselves.

Of this illustrative set, 19 case studies were selected for in-depth exploration and analysis (Table 1.3). The overarching criterion for the selection is non-event-centric disaster resilience leadership practices in the context of mitigation and recovery, characterised by high stakes, uncertainty, and a diminished sense of urgency. Under the ambit of this criterion, only those initiatives have been selected that are comprehensive, unique, sustainable, and claim to address the systemic and socio-structural root causes of disaster risk and bring about transformative change. The selection also involved the embodiment of the value of public good in the interventions. The unique pioneering initiatives meeting the earlier criteria were purposively chosen along with other similar cases to facilitate cross case comparisons. The ongoing initiatives where impacts are not documented or recorded are excluded from the final selection. Certain initiatives that fulfil the criteria mentioned earlier have been excluded owing to lack of substantive primary data due to the unavailability of key stakeholders for interviews. The selected 19 cases represent different ecoregions of the country and, therefore, ensure diversity within the country with respect to hazard, risk, vulnerability, topography, and geography (see Figure 1.4).

The selection and categorisation of cases in each of the thematic sections are based on the criteria presented as follows:

- The case studies on individuals in informal positions comprise only those individuals who were pioneers in their respective areas and are known for their innovative approach. Geographical dispersion of the interventions is also considered for the selection of cases.
- The interventions of public sector actors include integrated or mainstreamed initiatives, led by public institutions that are comprehensive, unique, and sustainable, and claim to address the root causes of disaster risk in building and/or strengthening disaster resilience.
- Case studies selected for the thematic section on civil society include civic associations, civil society organisations, and movements that work around the issue of representation and claims-making in the context of disasters, towards building disaster resilience among the most marginalised groups.
- The criteria for case studies within the theme of institutional leadership draw from the definition of 'special institutions', that is, those that involve criteria to establish their boundaries, principles of sovereignty, and chains of command. Established special institutions or organisations are conceived as actors or players who play by the rules of the game, also known as institutions, and have the potential to bring about institutional change. It, thus, comprises the

TABLE 1.3 A Snapshot of the Case Studies Investigated in the Book

No	*Case Studies*	*Location*	*Actor*	*Disaster/Non-disaster Context*	*Description*
1	Rejuvenation of traditional water harvesting structures in drought-prone regions—A case of the Waterman of India	Rajasthan	Individual (informal)	Disaster (drought)	This case study discusses the contribution of an individual, Rajendra Singh, the Waterman of India, in rejuvenating *johads* (traditional water harvesting structures) in Alwar district of Rajasthan, one of the most arid regions of India.
2	Transformation through social cohesion – The Seechewal Model	Punjab	Individual (informal)	Disaster (drought)	This case study highlights the Seechewal Model, implemented by the religious leader Sant Balbir Singh. It presents an example of adaptive performance, collective efficacy, and information sharing, where communities have joined hands under his leadership.
3	Restructuring institutional arrangement for water conservation—Pani Panchayat	Maharashtra	Individual (informal)	Disaster (drought)	Vilasrao Salunkhe's initiative of Pani Panchayat, or water council for people-centred watershed management, is aimed at organising people around existing village water resources for equitable sharing of water.
4	Artificial glaciers to enhance water availability in the cold desert—A case of the Iceman of India	Ladakh	Individual (informal)	Disaster (drought)	The initiative involved the construction of artificial glaciers proposed by Chewang Norphel in the 1980s that helped address the issue of water scarcity in many villages across Ladakh.
5	An innovation to turn scarcity into self-sufficiency—Chauka System by Laxman Singh	Rajasthan	Individual (informal)	Disaster (drought)	Yet another example of the efforts of an individual, Laxman Singh, to enhance water availability through the revival of traditional water conservation structures and rejuvenation of village ecosystems.

(*Continued*)

TABLE 1.3 (Continued)

No	*Case Studies*	*Location*	*Actor*	*Disaster/Non-disaster Context*	*Description*
6	Enhancing fish production through community engagement in Jharkhand—Matsya Mitra (Friends of Fish)	Jharkhand	Government Department	Disaster (drought and flood)	The Department of Fisheries in Jharkhand initiated a programme to make the state self-sufficient in fish production to secure the livelihoods of communities in the drought and flood-affected regions.
7	Riverbank stabilisation through vetiver plantation in West Bengal—Sabujayan	West Bengal	Government Department	Disaster (flood)	The case study covers an initiative meant for mitigating soil erosion due to floods in the Nadia district of West Bengal by planting vetiver grass. This flood-protection initiative, Sabujayan, was started by the Department of Panchayat and Rural Development and implemented under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
8	Spring-shed rejuvenation in Sikkim—Dhara Vikas	Sikkim	Career bureaucrat	Disaster (drought)	Dhara Vikas is an initiative started by the Department of Rural Management and Development under the MGNREGA scheme in 2010. It aimed to address the problems faced by people living in water-scarce regions of Sikkim, mostly in the state's southern districts and some parts of the west.
9	Towards making Maharashtra drought-free—Jalyukt Gaon Abhiyan and Jalyukt Shivar Abhiyan	Maharashtra	Career bureaucrat	Disaster (drought)	The Government of Maharashtra launched a water-conservation scheme, named Jalyukt Shivar Abhiyan, to make Maharashtra a drought-free state. It is a scale-up of the Jalyukt Gram Abhiyan, implemented by the then divisional commissioner of Pune Division (Maharashtra).

10	District-level leadership for reconstruction and rehabilitation post landslide in Malin village	Maharashtra	Career bureaucrat	Disaster (landslide)	The case study focuses on the processes of response and recovery in the landslide-affected village of Malin in Pune district of Maharashtra and the relief and rehabilitation work undertaken by the district administration.
11	Ideal village amidst drought—Hiware Bazar	Maharashtra	Political actor	Disaster (drought)	Hiware Bazar village is a notable initiative in which the efforts of local leadership and thrust on community participation resulted in its transformation to a model village under the leadership of the head of the village council.
12	Academic leadership for disaster resilience—A case of the Tata Institute of Social Sciences in the context of disasters	Pan-India	Institution	Disasters	The case study captures the recent transitions in a public-funded, deemed university in the developing world context, with a special focus on the process and nature of change in one of the emerging disciplines of disaster studies.
13	Corporate leadership for disaster resilience—The Tata Group's engagement with disasters	Pan-India	Institution	Disaster	Tracing the evolution of the Tata Group's—one of India's largest private sector enterprises—involvement in disaster response and resilience building, focusing on the changes in the two entities (Tata Sons and Tata Trust) within the Tata Group in response to the increasing challenges of disasters.
14	Regulatory institutions for disaster resilience—Gujarat State Disaster Management Authority (GSDMA)	Gujarat	Institution	Disaster (earthquake)	The factors leading to the emergence of and organisational changes in, the GSDMA, a pioneer in establishing an institutional framework for disaster management, are discussed.
15	Scientific institution's leadership for building disaster resilience—Indian Meteorological Department (IMD)	Pan-India	Institution	Disaster (cyclone)	The role of a dedicated institution, IMD, in building an early warning system in India and the various institutional changes it has undergone over the years.

(*Continued*)

TABLE 1.3 (Continued)

No	*Case Studies*	*Location*	*Actor*	*Disaster/Non-disaster Context*	*Description*
16	Women-centred leadership for disaster resilience—NGO and an association in the context of disasters	Gujarat	NGO/ association	Non-disaster	Two developmental organisations, ANANDI and SEWA, and their initiatives in the context of disasters and resilience-building are explored. Inspite of the gender and inclusion focus in both their initiatives, the NGOs follow different approaches to deal with relevant concerns.
17	Ethnic identity and leadership for disaster resilience—Young Mizo Association (YMA)	Mizoram	Association	Non-disaster	The largest NGO in Mizoram in disaster management, the YMA has been successful in blending traditional values and ethics in addressing the issue of disasters in contemporary times.
18	Collective identity and leadership in the context of disasters—Visthapit Mukti Vahini (VMV)	Bihar	Movement	Disaster (flood)	VMV is a movement that started in 2002 at Bankatwa village in West Champaran district of Bihar. It demanded proper rehabilitation of the displaced and those rendered landless due to *katav* (land erosion) caused by a flood in 1977.
19	Fifty years of drought risk reduction and management in Maharashtra	Maharashtra	Multiple actors	Disaster (drought)	The case elucidates the efforts by multiple actors in Maharashtra for drought mitigation and management over five decades.

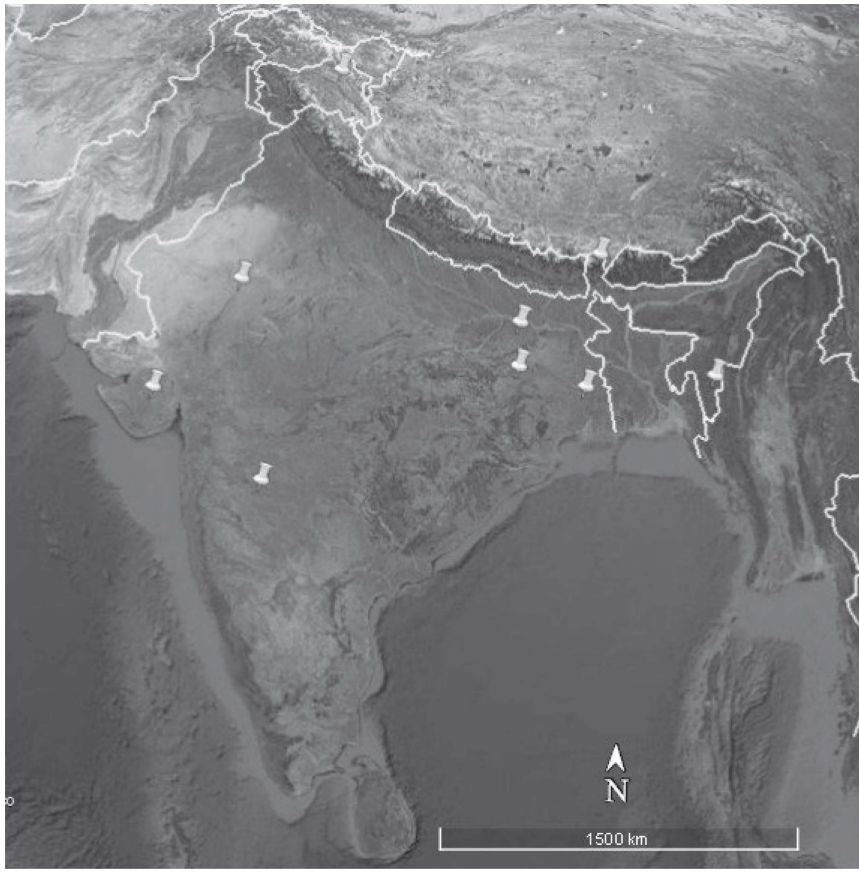


FIGURE 1.4 Geographical Spread of the Case Studies (Excluding the Case Studies with National-Scale Interventions)

pioneering formal, scientific, academic, and private organisations that have contributed towards building disaster resilience in the Indian context.

Structure of the Book

The first thematic section on 'Individual Leadership for Disaster Resilience' explores the emergence, processes, and outcomes of disaster resilience leadership in the Indian context. It identifies individual and environmental circumstances that contribute to the emergence of disaster resilience leadership. The five case studies included in this section focus on all aspects of the leader-follower life cycle to understand the unique characteristics of leadership in the background of building disaster resilience in India. These case studies include one initiative from Maharashtra, two from Rajasthan, one from Punjab, and one from Ladakh.

The second thematic section on 'Bureaucratic and Political Leadership for Disaster Resilience' draws from literature on public sector leadership, public sector innovation and entrepreneurship, and public network governance to focus on both the individual leader as well as the relationships built within one's networks. The analysis extends to understand the emergence of transformational or change-based leadership within public sector networks and the unique role of public sector actors, as agents of change in public interest, within collective policy discourse. The geographical spread of the cases includes three interventions from Maharashtra and one each from West Bengal, Sikkim, and Jharkhand. It delves into the motivation and objectives of public actors for pursuing public good in the context of disaster, challenges faced, and strategies used by them to build disaster resilience.

The third thematic section on 'Civil Society Leadership for Disaster Resilience' draws upon the theoretical perspective of self-organisation within and outside of the state to explore the assertions of the marginalised groups in the Indian context for the purposes of representation, claims-making, and provision of civic infrastructure in the disaster scenario. The analytical section attempts to understand the unique factors that contribute to the emergence and development of grassroots-level initiatives, the nature of civil society–state interface in the disaster and non-disaster context, and its implication for grassroots-level leadership development and disaster resilience. The case studies include the role of a women-led NGO, an association and a collective from the states of Gujarat, Mizoram, and Bihar.

The fourth thematic section on 'Institutional Leadership for Disaster Resilience' draws from old and new institutionalist theories to explore institutional emergence and change in new policy arenas, such as disaster risk reduction and management. It attempts to understand how the paradigm shift from relief to integrated risk management and resilience is reflected in the institutional arrangements beyond national-level regulatory bodies. The analysis chapter explores both the endogenous and exogeneous factors that contribute to institutional emergence and change. The four case studies include interventions by established academic, scientific, corporate, and regulatory institutions that primarily operate at the national and state levels to address the challenges of increasing intensity and frequency of disasters in India.

The concluding chapter attempts to capture the interface between the actors and their contexts presented in the earlier thematic sections, using the case study of drought management in Maharashtra. The sections in this chapter analyse and discuss the interfaces between leaders at varied levels, the challenges encountered, and the way forward in building disaster resilience.

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2

INDIVIDUAL LEADERSHIP FOR DISASTER RESILIENCE

Theoretical Discussion

This chapter shall explore the theories of individual leadership that can be used to understand the initiatives related to disaster resilience. First, we will look at the need for leadership for disaster resilience. Then we will investigate three main questions: How do leaders emerge? What are the practices used to mobilise groups and communities to strive for disaster resilience? What are the outcomes that can be used to assess successful leadership for disaster resilience initiatives? To do this, we will draw upon a few established theories of leadership and apply them to the context of disaster resilience in India. Based on this, we derive some propositions.

Need for Leadership for Disaster Resilience

Scholars (Demiroz & Kapucu, 2012; Trainor & Velotti, 2013) have variously established the need to understand leadership for disaster resilience. Yet scholarly attention has been scarce with regard to the operational aspects of leadership for disaster resilience and humanitarian response (Clarke, 2013, 2014).

Heifetz (1998) distinguishes between routine emergencies and a true crisis. In a routine emergency, the problem is clearly defined, and its solution and implementation are also clear. In contrast, in a true crisis, defining the problem itself requires some learning and, therefore, so do solution and implementation.

Routine emergencies may include natural disasters and infectious diseases. Though these may be severe, they are termed 'routine emergencies' because society can anticipate their type, features, and consequences. Since these can be anticipated, society can prepare for them (Leonard & Howitt, 2012). In routine emergencies, the kind of work required to be done is technical, and the responsibility for doing this technical work is primarily with the individual that has the authority or the expertise (Heifetz, 1998).

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A true crisis has an element of novelty that precludes a set programmed response and requires ingenuity, invention, and creativity (Leonard & Howitt, 2012). In the case of a true crisis, the work required to be done is adaptive in nature. Adaptive work consists of "learning required to address conflicts in the values people hold or to diminish the gap between the values people stand for and the reality they face. Adaptive work requires a change in values, beliefs, or behaviour" (Heifetz, 1998, p. 22). Adaptive challenges can only be addressed through leadership and not through authority or expertise.

During a routine emergency, leaders help to provide - problem definition, solutions, and protect the team from outside challenges by clarifying the team members' roles and responsibilities. In contrast, in a true crisis, leaders identify the adaptive challenge(s) and formulate the key questions which need to be addressed. In this case, the leader challenges the current roles and encourages collaborative problem-solving with the team (Heifetz & Laurie, 1997).

A common mistake leaders tend to make is to treat a true crisis as a routine emergency. This is facilitated by two mutually reinforcing illusions: First, individuals crave a charismatic leader who can take charge of the situation during a crisis, as it fulfils the team members' need to give up responsibility and remain passive. Leaders also tend to display heroism, rather than leadership, since this fulfils the leader's need for attention and control. While this mutually co-dependent dynamics between leaders and followers may address the crisis in the short term, it adversely affects long-term outcomes for the group (Heifetz, 1998). At times, too much control by the leader may reduce performance in a crisis (Wegge et al., 2019).

The paradox of short-term wants versus long-term needs of the group may be addressed by temporal splitting. In other words, initially, some display of charismatic behaviour, heroism, or self-sacrifice on the part of the leader may help stabilise the situation and buy time. However, the leader must then begin to address the main reason for the emergence of the crisis and build capabilities within the group to thrive in the new reality. This can be done by engaging people to tackle the tough challenges that they face (Heifetz et al., 2009).

Scholars have distinguished two main aspects of leadership: leadership emergence and leadership outcomes (Hogan et al., 1994; Lord et al., 1986). Another aspect of leadership that has been relatively ignored is the process by which leaders achieve outcomes for the group (Shamir et al., 1993). Hence, in the sections that follow, we investigate each of the three aspects of leadership, namely, leadership emergence, leadership processes, and leadership outcomes.

Leadership Emergence

Leadership emergence deals with the likelihood of an individual being perceived as a leader by others (Judge et al., 2002). In the presence of limited information about potential leaders being available to group members, it is likely that there are

several heuristics used by group members to grant leadership status to individuals in the group.

One of the most prominent heuristics is that of gender. Though traditional perceptions of women are changing, men are still perceived as leaders more frequently than women (Badura et al., 2018). The other most visible aspects of individuals which contribute to leadership emergence include personality and intelligence. Extraversion, the extent to which an individual is displaying high energy, sociability, assertion, and action, is a good predictor of leadership emergence (Judge et al., 2002). The other personality factors which contribute to leadership emergence are conscientiousness and emotional stability (Taggar et al., 1999).

The role of intelligence in predicting leadership is much lesser than was earlier thought. In fact, the extent to which an individual is perceived as intelligent by the group is a far stronger predictor of leadership emergence than an individual's actual (or measured) intelligence (Judge et al., 2004). Research on personality traits that predict leader emergence is increasing (Antonakis et al., 2014), and some scholars (Judge et al., 2009; Pierce & Aguinis, 2013) are also exploring whether personality and intelligence have a non-linear (inverted U-shaped) relationship with leadership emergence. Perhaps, these qualities need to be present in an optimum amount, beyond which they may become dysfunctional.

In addition to personality and intelligence, scholars have also identified more subtle individual differences which may predict leadership emergence, such as motives, values, and moral reasoning. The earliest and the most influential work in the area of studying a leader's motives was by the Harvard psychologist David C. McClelland and his associates. McClelland showed that effective leaders were those whose need for power was greater than their needs for achievement and affiliation, and those who had a high activity inhibition (McClelland & Burnham, 1976/2003). This was further validated in a study of 31 US Presidents, where it was found that activity inhibition and need for power was significantly and positively related to presidential charisma (House et al., 1991).

Another promising aspect of individual differences predicting leadership emergence is values. Values are beliefs that form the core of an individual's personality (Posner & Schmidt, 1992). Values may be dealing with an individual's life goals (terminal values) or ways of being (instrumental values), and these are arranged in a hierarchy of preferences (Rokeach, 1973). Krishnan (2001) showed that individuals who give more importance to other-oriented (or social) values are more likely to be perceived as transformational leaders by their group members as compared to individuals who have the opposite preference.

The most unexplored area of individual difference contributing to leadership emergence is that of the moral development of leaders. There is some empirical evidence illustrating that individuals having higher levels of moral reasoning are perceived as more transformational by subordinates (Turner et al., 2002). Similarly, empirical studies by Popper et al. (2000) have shown how an individual's internal working model of self and others can predict transformational leadership.

If we move beyond the individual differences of leaders in isolation and consider aspects of the leadership relationship, we can get a more meaningful understanding of the interactions among the three interrelated elements of leader, follower, and context. Taking these three elements together helps understand not just the leader's characteristics but the effects of these characteristics on specific individuals in a given context. We explore two such approaches: Weber's (1964) understanding of charismatic authority and van Knippenberg's (2018) social identity theory.

Charismatic Authority

There are three main types of legitimate authority: rational authority (based on legal and bureaucratic position), traditional authority (based on the sanctity of traditions), and charismatic authority (based on the heroism or personality of an individual) (Weber, 1964). Further, Weber describes the charismatic relationship as consisting of five elements: an extraordinary individual, a situation of crisis, ideas that promise a solution to the crisis, followers who are attracted to the individual and his/her ideas, and some initial successes in dealing with the crisis (Trice & Beyer, 1986).

Social Identity

Another mechanism for leadership emergence is the role of identity, which is the perception of potential leaders and followers as belonging to a group or social category (van Knippenberg, 2018). One of the factors that determine leadership emergence and effectiveness is the extent to which an individual accurately represents the group members (Giessner et al., 2009; van Knippenberg & van Knippenberg, 2005). Moreover, in the absence of strong group prototypicality, leader self-sacrifice may enhance followers' perceptions of leader charisma and effectiveness (Burns, 1978; van Knippenberg & van Knippenberg, 2005).

Individuals are seen as leaders of a group when they accurately represent the group members (Giessner et al., 2009; van Knippenberg & van Knippenberg, 2005), and they are seen to be charismatic when they display heroic and self-sacrificing behaviour (Burns, 1978; van Knippenberg & van Knippenberg, 2005).

Proposition 1: Individual and environmental circumstances facilitate the emergence of leadership for disaster resilience. Both these factors interact to enable the emergence of leadership for disaster resilience.

Leadership Processes

Leadership in social organisations is distinct from formal authority (Burns, 1978). At times, the two kinds may converge and, hence, may be exercised by the same individual. The convergence may result in a (new) formal position that can provide

more opportunities for exercising leadership. However, by no means are they the same. In this section, we explore the leadership processes and mechanisms which enable leaders to impact their followers and create positive outcomes for the group.

There have been comparatively fewer studies that provide a motivational explanation to account for the effects of transformational leaders (Shamir et al., 1993). Some authors have proposed motivational mechanisms to account for the outcomes of transformational leadership; however, most of these studies have been done in organisational contexts, and few of these theories have empirical support. Validated empirical studies have revealed such mediating variables as trust (Jung & Avolio, 2000; Pillai, Schriesheim et al., 1999), value congruence (Jung & Avolio, 2000), group culture (Ogbonna & Harris, 2000), job characteristics, intrinsic motivation, goal commitment (Piccolo & Colquitt, 2006), and procedural justice (Pillai, Schriesheim et al., 1999).

Transformational Leadership

Bass (1985) described four kinds of leadership behaviours, namely, idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. Idealised influence refers to leader behaviours that are symbolic of the leader's values, including sacrificing for the group and courageously expressing his or her values. Inspirational motivation includes leader behaviour wherein leaders show their followers a meaningful vision of the future and how they can be effectively engaged in the achievement of that vision. Intellectual stimulation includes leaders encouraging followers to ask questions, challenge the status quo, and undertake out-of-the-box thinking. Finally, individualised consideration includes the leader's behaviour of mentoring and meeting the individual needs of people.

Bass (1985) described three interrelated ways through which leaders transform their followers. The first is by raising their level of awareness and consciousness about the importance and value of designated outcomes, and ways of reaching them. The second is by getting followers to transcend their self-interest for the sake of the team, organisation, or larger polity. The third is by altering their need level or expanding their portfolio of needs and wants.

Dynamics of Wants and Needs

Burns (1978, 2003) describes the process of leadership as a dynamic interaction between leaders and followers. Followers who face difficult circumstances articulate their wants depending on their own subjective experiences. Leaders identify the needs underlying these articulated wants and seek to satisfy them to the extent possible. Leaders use these needs to articulate attractive visions of the future. Since, in these visions, followers can identify their unmet needs being met, the visions resonate with them, and they voluntarily work towards achieving the same. Over time, as followers' needs get met, they develop newer wants and needs. If the leader keeps pace with the growth and development of followers, the leadership relationship

continues, and if not, the followers will seek other leaders who can promise to fulfil their new emerging needs.

Self-Concept-Based Theory of Motivation

Shamir et al. (1993) proposed a self-concept-based motivational theory to explain the mechanism by which leaders enabled followers to transcend their self-interest for the sake of the group. According to this theory, leaders achieve transformational effects by implicating the self-concept of followers in three ways. First, leaders link group-focused efforts and goals to the followers' self-concept, thereby enhancing the intrinsic value of group-focused efforts using self-expression, self-consistency, self-esteem, and self-worth. Second, leaders enhance the importance of group values and identities, as compared to others, and make it more likely that these values and identities are expressed in actions. As followers start acting according to socially based values and identities, they shift from being concerned only about themselves to being concerned about the team. Third, leaders express positive evaluations, communicate high performance expectations of followers, show confidence in followers' ability to meet such expectations, and emphasise the individual's ties to the collective. In this manner, leaders enhance self-efficacy and collective efficacy. Some of the propositions of this theory were tested in a study by Shamir et al. (1998), but the theory was not adequately supported.

Leadership of Social Movements

Most studies to understand the mechanisms of leadership have been carried out in organisational contexts. There are few theories exploring leadership processes in a broader social context. One such theory is that of Ganz and McKenna (2017). Based on a study of various social movements, they identified five interdependent leadership practices: relationship-building, narrative, strategy, structure, and action.

The initial mobilisation of individuals in the movement is a process of building a network of strong and weak relationships (Ganz & McKenna, 2017). All the case studies reflect examples of the leaders reaching out to individuals, close to them, to start building their initiatives. Specifically, the leaders worked simultaneously on two networks—a strategic network to get resources and an operational one to get their day-to-day work done, thus, conforming to the postulations made by Hill and Lineback (2011). Having built strong relationships, the leader then develops a powerful story rooted in the group cultural context which includes three elements: description of the status quo, description of the ideal state, and impulse to act (Ganz & McKenna, 2017). The story provides the emotional basis to followers for joining the initiative and action.

The initial two processes of relationship-building and narrative development attract followers to the movement. This emotional pull is supplemented by a concrete strategy to deal with the problem. Drawing on multiple—global as well

as local—sources of knowledge, the strategy is a technical solution to the problem faced by the community (Ganz & McKenna, 2017). While the narrative provides the emotional bedrock for the movement, the strategy provides the technical means by which the movement can solve the problems of the community. Once the initial relationships are established and the narrative and strategy are in place, the movement is likely to achieve some traction. As the movement grows, there is a need to develop a bureaucratic framework for its efficient operation. Well-developed networks of responsibility and accountability in the organisation help in coordination as well as development of leadership skills among group members (Ganz & McKenna, 2017).

Finally, leaders help the group take action towards achieving goals by leveraging resources such as time, money, and commitment. Mostly, leaders rely on the voluntary commitment and action of members. However, these are, at times, facilitated and supported by group norms and social pressure.

Proposition 2: Leaders use processes, such as relationship-building, narrative formation, strategy development, structure, and action, to help achieve group goals.

Leadership Outcomes

Does transformational leadership matter? This is a question that has been repeatedly asked by researchers. While it is often taken as a fact that leaders have a significant and crucial impact on organisations, this individualistic view has been increasingly questioned by contextualists, who emphasise the constraints that are placed on leaders by situational factors (Thomas, 1988).

Using Kelly's theory of attribution, Pfeffer (1977) explained that people develop attributions in order to get a sense of control over the environment. Hence, the emphasis on leadership may have arisen partially from a desire to believe in the importance and the effectiveness of individual action. According to Meindl et al. (1985), the concept of leadership has been given status and significance that far exceeds its scientific value. Because of the grand imagery and mythology associated with leadership, academics and business professionals have developed "highly romanticized, heroic views of leadership—what leaders do, what they can accomplish, and the general effects they have on our lives" (p. 79).

This exaggerated perception of leadership makes individuals assume that leadership is the most important force in all organisational events and occurrences. The source of this bias or preconception is that observers' need to have "an intellectually compelling and emotionally satisfying comprehension of the causes, nature, and consequences of organizational activities" (Meindl & Ehrlich, 1987, p. 92).

Despite these criticisms, several studies have shown significant relationships between transformational leadership and positive organisational outcomes, such as subordinate satisfaction (Hater & Bass, 1988; Pillai, Scandura, et al., 1999; Ross & Offermann, 1997), perceived justice (Pillai, Scandura, et al., 1999), self-efficacy

(Kirkpatrick & Locke, 1996), group potency (Sosik et al., 1997), organisational citizenship behaviour (Podsakoff et al., 1990; Wang et al., 2005), follower performance (Waldman et al., 1987), collective performance (Hoffman & Jones, 2005), performance quality, performance quantity (Kirkpatrick & Locke, 1996), and work unit effectiveness (Lowe et al., 1996).

Leadership outcomes may be seen in terms of enhancing the material circumstances of the group or raising the awareness of group members towards common issues and the need to work cooperatively towards common outcomes (Burns, 1978). The best leaders are those who not only solve real problems of the group members but also sufficiently inspire and awaken the community to identify, explore, and solve their own problems in the future. The process of transformation is a dynamic process in which leaders respond to the evolving needs of the followers and, in doing so, elevate the physical and social consciousness of their group members. As a result of this, several leaders spontaneously emerge from the group to ensure the continuation of the movement even after the first leader has moved away.

The sustenance and development of a social movement over time has been explained in the form of multiple frameworks. Weber (1964) described charisma routinisation as the process by which the followers of extraordinary individuals ensure the sustenance of an initiative started by a charismatic individual. Trice and Beyer (1986) summarised their understanding of Weber's process of routinisation in the form of five elements: (i) development of an administrative structure; (ii) rites, ceremonies, and symbols; (iii) incorporation of the mission into written and oral traditions; (iv) selection of a successor; and (v) continuation of work towards the mission started by the charismatic.

Another framework for analysing the effectiveness of a civic organisation has three elements: public recognition, member engagement, and leader development (Andrews et al., 2010). In addition to these three elements, the cases have been evaluated on two other elements. First, the extent to which the leader-follower relationship evolves to meet the changing times and needs of the followers (Burns, 1978). The relationship is dynamic, and the followers are continually evolving. While leadership begins with the leader addressing the authentic needs of the follower, over time, followers evolve and have higher-order needs. To the extent that leaders can help followers achieve these higher-order needs, the relationship between leaders and followers will continue. If not, followers will seek out new leaders to meet their growing needs. Second, the extent to which the movements were inclusive and addressed the needs of a diverse constituency, irrespective of case, class, or gender.

Proposition 3: The outcome of successful leadership is the sustenance of the activities of the group, in the direction of their intended vision, even after the leader has left the group. The ability of the group to respond to changing needs sustainably and equitably defines the success of the leadership.

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3

INDIVIDUAL LEADERSHIP FOR DISASTER RESILIENCE

Case Studies and Analysis

The five cases of individual leadership in a disaster resilience context in India that we are going to describe will validate some of the propositions derived in Chapter 2. The cases are from different parts of India and have occurred at different times, but there are several aspects that provide useful insights. The data for the cases was compiled partially from secondary sources and partially by a team of researchers visiting the sites and speaking to the protagonists, their team members, and some beneficiaries. The case data is also segregated based on the analytical frame of leadership emergence, leadership practices, and leadership outcomes.

Rejuvenation of Traditional Water Harvesting Structures in Drought-Prone Regions: Waterman of India

Rajendra Singh, winner of the Magsaysay Award in 2001 and the Stockholm Water Prize in 2015, is also known as the Waterman of India. Since 1985, Singh has been instrumental in transforming several dry regions in Rajasthan, using the power of community labour to build small earthen check dams to capture and conserve water. His unique approach of leveraging community wisdom and community labour to create common resources has been replicated several times. Singh is a highly influential water conservationist and environmentalist, and his organisation has expanded its activities into several diverse areas.

Leadership Emergence

In 1975, the students and faculty of the University of Rajasthan started an NGO called the Tarun Bharat Sangh (TBS). Singh, an Ayurvedic doctor and member of TBS, was inspired by the ideals of Mahatma Gandhi. He dressed in simple khadi (hand-spun yarn) and wished to work for the welfare of India's villages. He quit

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his job in November 1984 and travelled to Kishori, a remote village in the Alwar district of Rajasthan, with four of his friends, all members of TBS. They started working on rural development, focusing on literacy. Before long, they realised that the children did not have time to study since they had to help their parents in fetching water.

Their efforts were initially met with resistance from the community due to rampant militancy in the region. However, later, the villagers supported and helped them with accommodation. Mangu Meena, a landowner, was impressed by the four young men's dedication and became Singh's friend. Singh focused on strengthening bonds between the different caste groups and making them aware of their mutual dependence. Later, Meena encouraged Singh to focus on water, specifically on the breakdown of traditional systems of water harvesting, such as *johads*, anicuts, and bunds.[1] With his help, Singh learned the indigenous practices of water harvesting and conservation. This included observing the nature of vegetation whereby one could identify the nature of fractures in the earth's crust and ascertaining if the fractures in the earth's crust are horizontal or vertical, enabling the determination of an appropriate means of storing water (Singh, 2017).

Singh also hit upon the idea of tapping monetary contributions from village traders and labour from villagers. Since both capital and labour were sourced locally, this ensured that the villagers had a sense of pride and ownership in their work and the resources that they built (Singh, 2017). After two years of persistent hard work, Singh constructed a johad on Meena's land. The johad, a low-level earth bank, holds back the flow of water when it rains and allows water to seep into the ground for future use. After the rains, the johad filled up, and villagers in the entire region saw the benefits of the structure. This example of transformation convinced the villagers to replicate such initiatives in their own stretches.

Leadership Practices

Singh encouraged unemployed youth from the nearby villages to support him in his work and employed several landless and seasonal labourers, thus creating valuable resources through community efforts. His ideas were based on Mahatma Gandhi's ideology of *shramdaan* (voluntary labour) and equality and dignity for all in society. According to him, "involvement of the community and its physical labour creates a sense of ownership of the natural resources among the villagers." To promote public awareness, the TBS carries out awareness marches which helps mobilise communities and identify potential leaders.

The TBS uses symbols of gods and goddesses, considered sacred by the people, in their messages and slogans for promoting afforestation. They also emphasise the use of indigenous resources and ideas to solve local problems, using the involvement of the local communities. When required, the TBS seeks advice from farmers and researchers to combine new ideas with traditional knowledge. Over the years, it has implemented several new technologies such as drip irrigation and organic farming.

Whenever the TBS is involved with a village, it first identifies the local leaders. Gopal Singh, a senior member of TBS, said that the organisation tries to identify five types of people:

> Not everyone in the village is the same, but every village has 5 kinds of people: (i) *durjan shakti* (wicked force) who are found in small numbers but are needy; (ii) *avsar vadhi* or *mauka parasth* (opportunists) who are present in greater numbers and are always looking for opportunities; (iii) *sajjan shakti* (commoners) who are in majority but who only think and keep quiet; (iv) *prerak shakti* or *margadarshak* (intellectuals) who are very few in number and waiting for the right time to intervene, and (v) *prabhavshali* (charismatic persons) who may be one or two but can provide direction to the villagers. They have a special place in the people's minds.

Having identified the five types of people, the TBS's main task was to bring together the intellectuals and the charismatic sections. Eventually, others joined the movement. Even though the wicked rarely join the movement, the coming together of all the other four groups ultimately benefits them as well.

To organise the community, the TBS forms a *gram sabha* (village assembly), distinct from the Panchayati Raj Institutions or local self-governance bodies. They select people for the sabha, based on their knowledge, attitude, and experience. A senior adult or female member from each household is part of the gram sabha, where all concerns are discussed. After this, the TBS begins its work on selecting the site, designing the structure, and preparing a budget. Four main aspects are ensured. A water usage master plan is prepared to help the villages audit their water requirement and usage in every household. Next, a water committee is formed to look after forest conservation and address the issues and concerns of various groups, such as women and farmers. Following this, sites are selected for watershed initiatives, and the type of structures are decided based on cost, the flow of water, land types, and the likely benefits. Finally, the beneficiaries are called upon to decide on donation of money or voluntary labour. The TBS ensures that at least 30% to 40% of the costs are met from community contributions.

Often, the TBS is forced to exit projects because of the unwillingness of the community to work, conflicts within the gram sabhas, villagers losing patience, or instances when the project fails to yield the expected benefits. Only when there is sufficient involvement of the community does it continue with its work.

Leadership Outcomes

The TBS has been instrumental in rejuvenating nine rivers: two in Maharashtra, one in Karnataka, and six in Rajasthan. Water conservation and river rejuvenation have changed the face of Rajasthan and created employment opportunities for the

local communities. This, in turn, has reduced and even reversed the migration in the region (Singh, 2017). Not only has the ecological balance been restored, but living conditions have also improved, and traditional knowledge has been revived.

Over the years, the focus has shifted from only implementing water conservation to making villages self-reliant and encouraging communities to participate in their self-development (TBS, 2020). In addition to the construction of cost-effective rainwater harvesting structures, the organisation now employs landless and seasonal labourers. In the last 35 years, the organisation has worked in more than 1,000 villages in the state and has constructed about 15,000 rainwater harvesting structures through community efforts. As a result of community-driven decentralised water management methods, about 1.7 million people have benefitted (Dixit, 2020).

Since the early 1990s, the TBS and Rajendra Singh have been in the media spotlight. He is an influential and respected voice in national and international policy debates on community-based initiatives. A Swedish impact assessment has noted that the water levels in open wells of the region and crop yields have significantly increased (Sinha et al., 2013). Occurrences of drought have reduced due to the creation of water zones and a system for equitable distribution. This model has helped communities in rural Alwar come out of poverty and has also been implemented in other districts of the state.

The organisation functions like an ashram, with an emphasis on cleanliness and a pollution-free environment. The residents of the ashram have strong communal bonds with egalitarian ideals. People from different walks of life share space equally, irrespective of their socioeconomic status. The TBS also hosts the Tarun Jal Vidhyapeeth, a training institute where farmers interact with each other and learn new ideas and methods from experts.

Transformation through Social Cohesion Faith Leader: Sant Balbir Singh

Balbir Singh Seechewal is a spiritual leader of the *Nirmal Kuteya* (blissful hut), a Sikh community in Seechewal in Punjab. His work in river cleaning, pollution control, and environmental awareness has won him many accolades in India and abroad. He and his movement have transformed the entire region. Sant Balbir Singh, as he is popularly known, leads his followers by example and inspires several others to support the community cause. The Nirmal Kuteya initiative is an example of how harnessing the efforts of the community in cleaning a river can build community resilience.

Leadership Emergence

Balbir Singh was born in 1962. In 1981, while in college, he was deeply influenced by the teachings of Sant Avtar Singh. He dropped out of college and joined his

spiritual master at Nirmal Kuteya, the ashram of the Nirmalas of Seechewal. The Nirmalas were a sect formed in the 1680s by the tenth Sikh Guru, Guru Gobind Singh, to study Sanskrit holy books to consolidate the philosophical views of Sikhism. Most Nirmalas were migratory, moving from place to place, preaching to people. However, one group of Nirmalas led by Sant Baba Lal Singh decided to settle down in the region near Seechewal. After Sant Baba Lal Singh died in 1978, his 28-year-old successor, Sant Avtar Singh, continued his work.

When Sant Avtar Singh first came to Seechewal in the late 1970s, the place was like an arid desert with sand dunes, reeds, and grass. The town was not easily accessible by road, and there was no regular supply of water or electricity. Sant Avtar Singh transformed Nirmal Kuteya by planting several fruit trees. In 1988, he was killed by some people trying to destroy the plants. After his passing, Sant Balbir Singh took charge as the leader of the monastery.

It was a difficult time, but he tried to continue the good work his master had started. Sant Avtar Singh had always wanted Seechewal to be well-connected by road so that the people could have opportunities for a better livelihood and a good standard of living. Seechewal started working on building roads in the area with the support of the community. In his words, "women, young and old, men and children worked together to tear down the big sand mounds. This was the start of our road to progress. There was collective belief and willpower." His success in this endeavour earned him the title *Sarkan wala Baba* (saint of the roads). However, what catapulted him to fame was his role in transforming a river.

The river Kali Bein (black river) was of great historical and religious significance since it was after a dip in this river that Guru Nanak, the first guru of the Sikhs, uttered what is now known as the essence of the Sikh philosophy. Not only was this 160-kilometre-long river symbolic, but it was also deeply integrated with the economic and cultural life of the people. Nearly 80% of people in the Doab region of Punjab depend on its waters for irrigation.

Years of encroachment and discharge of industrial and domestic waste had completely polluted the river, and the pollutants had also seeped into the groundwater. Due to the fertiliser residue, algae and aquatic plants had clogged the waterways and depleted the oxygen content of the waterbody. As a result, the river was filthy. In July 2000, Singh decided to do something about this river. He began by cleaning the waste in the river himself. Soon, his followers from Nirmal Kuteya joined him and, thus, set an example for the local community. The community members worked enthusiastically, using machinery to remove debris from the river and pull out weeds. Singh had emerged as a leader for this community and had mobilised their efforts towards transforming the river.

Leadership Practices

Inspired by Singh's strong example of selfless service to the community, the people willingly and wholeheartedly participated in several community projects. They not only cleaned the river but also planted trees, built sewage treatment

plants and reused the treated water for agriculture, and built roads to improve transportation.

Singh is a master of rhetoric. When he speaks, he quotes extensively from the Sikh scriptures, highlighting aspects of the interdependence between man and nature. He shows tremendous confidence in people, saying, "Nanak, your believers are your army. They will fight and win this for you." He applied the Sikh philosophy of *seva* (service) and *shramdaan* (voluntary contribution of labour) to mobilise people for community work and also instil a sense of collective identity among the members. They got immense satisfaction from their efforts. One of the community members of Seechewal said this:

> When we look at the roads leading to Sulthanpur Lodhi, we feel a sense of accomplishment over how we worked together to build the roads and to make the river so beautiful. We can now breathe clean air. It was our efforts that resulted in so much good.

Cleaning the river was just the first step. The next challenge was to deal with the inflow of untreated sewage into the river and discharge from upstream factories. The following is according to Balbir Singh:

> We blocked the pipes (carrying the discharge). This angered the administration but our position was clear: no one has the right to dirty the river. We challenged the officials to drink the dirty water (to prove to us that it is safe) or to make alternative arrangements.

Due to this, the government constructed a sewage treatment plant. But in some areas, like Sultanpur Lodhi and Kapurthala, people are still fighting for treatment plants to be set up. Today, as the river flows freely, Singh says, "the government cannot deny us credit for our efforts."

To ensure the cleanliness of the river, he and the volunteers regularly check the river for various purity parameters. As part of the river cleaning initiative, three main activities were undertaken. First, industrial and domestic waste discharge in the river was stopped, and waste treatment plants were set up in villages and cities along the river. The treated water from these plants was used for irrigation. Second, desilting was done to recharge the water table. Third, plantations were cultivated on the banks of the river for beautification.

The Seechewal Model of sewage system has followed a six-step process to keep the village clean and green. The sewage water from the village was directed to a pool; objects floating on the surface were separated with a filter; the polluted water was taken to a series of wells to remove silt, fats, oil, and ghee; the water collected in the pond was disinfected by the sun's rays; a pump on the banks of the pond pumped the treated water to the fields; and the treatment plan is now surrounded by plantations.

To build trust, Singh started a community radio in 2010 for Seechewal and its nearby villages. The radio show has improved social cohesion and facilitated collaborative problem-solving processes.

Leadership Outcomes

Since 2003, following the cleaning of the Kali Bein, its water is now fit for drinking. It is now a great asset to the community as it recharges groundwater and helps drain excess water, thereby preventing floods in the nearby fields. It is also an important source of water for irrigation, and improvement in the river's water quality has increased the agricultural output. Seechewal and Sultanpur areas are now the biggest exporters of melons in India. Once a wasteland, it is now a land of plenty and a source of fruits and vegetables.

A study done in 2008 found that more than 90% of the community believed that the Seechewal Model had led to substantial benefits to the environment, the lives of people, and awareness and sensitivity towards the environment. The community-based conservation initiative paid rich dividends to the community in and around Seechewal (Nigah, 2008).

The local community has started seeing the river Kali Bein as a source of revenue through religious activities and ecotourism. The improved infrastructure not only makes it much easier for pilgrims to visit places, like Sultanpur Lodhi which are of religious importance to the Sikhs, but also makes it easier for farmers to trade their produce.

Due to the upgraded sewage system, the village has a cleaner environment. The treated water is used for irrigation which conserves the groundwater. Removing water hyacinths in the river has helped relieve water logging. As a result of all this, there has been a considerable improvement in the water table. In the Seechewal village, where the model was first implemented, people use the treated water for irrigation. In Sultanpur Lodhi in the Kapurthala district, the treated water of the town's discharge is used to irrigate more than 750 acres of land through a 13-kilometre-long pipeline laid by the community. In the Dasuya village of Hoshiarpur district, treated water irrigates 400 acres of agricultural land through a 5-kilometre-long pipeline. While 45 villages situated along the banks of Kali Bein have already implemented the Seechewal Model, work has started in several villages of Doab and Malwa regions. About 1,650 villages from 5 states have adopted this model under the Ganga Mission. Singh says this:

> Seechewal model is a model of prosperity. It preserves natural resources, saves groundwater, saves energy, decreases the spread of diseases, saves the expenditure of farmers, and brings more profit to them. It is also economical and promotes organic farming. More and more villages are turning to it. The model will help save precious natural resources and the ecology, if it is implemented honestly by all.

More importantly, these achievements have instilled a sense of common identity, shared destiny, and self-confidence among members of the community. Balbir Singh has made real change in the lives of his followers, the Sikh philosophy of self-reliance and living in harmony with nature. Earlier, there were problems relating

to caste differences and illiteracy. The emphasis on a common goal of a clean and pollution-free environment has created a sense of unity among the population. Due to shared responsibilities for transforming the environment, there is a sense of shared ownership, trust, and accountability.

Balbir Singh, well-known as an anti-pollution and pro-environment leader, gets invited to various national and international conferences on environment and climate change. He also serves on government panels. The momentum of economic and environmental improvements in the Seechewal region has percolated to neighbouring areas as well as other states.

Restructuring Institutional Arrangement for Water Conservation: Pani Panchayat by Vilasrao Salunkhe

Vilasrao Salunkhe's initiative in Pune in 1974 was one of the earliest attempts at people-centred watershed development. Popularly known as the Pani Panchayat (water council) initiative, it aimed at organising people around village water resources for equitable sharing of water.

Leadership Emergence

Salunkhe graduated in engineering in 1960 and started a workshop for winding electric motors. After his workshop was destroyed in the 1961 floods, he started another business venture, manufacturing precision instrumentation, which was extremely successful. In 1972, there was a severe drought in Maharashtra. An acute scarcity of water and fodder led to widespread misery for people over three years (Brahme, 1983). During this period, Salunkhe toured the rural areas of the state. In the Zendewadi village, he noticed that farmers had built bunds to store water. The farmers also dug grooves in their fields which helped the absorption of water by the soil and, in turn, improved its water holding capacity, leading to an increase in the water levels in the wells. This experience triggered Salunkhe's movement.

Due to his regular visits to Naigaon, he had developed a rapport with the local community. With the help of a few colleagues, he set up the Gram Gaurav Pratisthan (GGP). The villagers were enthused with the idea of drought-proofing the village, and in 1974, they helped him get a lease of 40 acres of barren and rocky land from a temple. Salunkhe first cleared the land and constructed bunds to prevent soil erosion. He then constructed two percolation tanks of 18 million cubic feet and 5 million cubic feet, respectively. A system of bunding was undertaken at different places, and 16 wells were dug from the highest to the lowest points.

Salunkhe's efforts paid off, and water became available for irrigation for eight months. It resulted in 23 acres of irrigated area and 6 acres of tree cover. Crops like bajra, jowar, cotton, groundnut, onion, and grapes were cultivated with significant improvement in yields. During this time, Salunkhe received support from

his wife and two villagers who showed keen interest in his experiments. Kalpanatai (Salunkhe's wife) puts it this way:

> With our Naigaon model, we could increase productivity by 15 tons in the first year itself. And three people were permanently employed for all 12 months to take care of the land.

Initially, the villagers were sceptical because they thought that he did not have the expertise or experience in agriculture. However, over time, when they saw the results, they began appreciating his efforts.

Leadership Practices

After his initial success, farmers started approaching Salunkhe for ideas to combat drought. His methods, known as the Naigaon Pattern or Naigaon Project, became popular. Salunkhe concluded that in drought-prone areas, small collective lift irrigation schemes could help.

In September 1978, a group of 40 farmers discussed with Salunkhe the idea of using water from a nearby stream for irrigation. He advised them to dig a well near the percolation tank and emphasised the principles to be considered while developing and executing a scheme. These included collective benefit, irrigation rights for landless persons, irrigation only for seasonable crops, sharing of irrigation costs by community members, and planning and execution of the scheme by beneficiaries. The Pani Panchayat was a committee of beneficiaries for the maintenance of the lift irrigation system. The first Pani Panchayat was established in 1979 on 2 October, the birth anniversary of Mahatma Gandhi.

Salunkhe envisaged it as a collective movement, in which people would come together to form a Pani Panchayat. The GGP would assist and guide these collectives in their administration and in obtaining electricity connections. The GGP was to provide financial (interest-free loans) and technical (selection of motors, providing inputs for the design and installation of pipelines, etc.) support. This robust package, to develop lift irrigation schemes, proved to be attractive to farmers. Further, Salunkhe gained the trust of farmers by demonstrating the success of his experiments in Naigaon. Although the Pani Panchayats, propagated by Salunkhe, were informal institutions and not intended as cooperatives, "in practice, they follow certain cooperative principles like equal sharing of costs and benefits and maximisation of community welfare" (Thakur & Pattnaik, 2002).

Once a village community decided to develop a lift irrigation scheme, a Pani Panchayat was formed. The committee consisted of five (*panch*) members, tasked with the responsibility of managing the panchayat. The committee organised the documentation, relating to land records and cropping patterns, and its procurement from various agencies. The committee also ensured necessary arrangement of land for the pump house and associated equipment. It appointed a *patkari* (water

distributor) for operations, to ensure timely water distribution and to collect *pani patti* (water charges) from households.

The GGP's task included a technical survey of the area using technicians. Once a lift system became operational, the Pani Panchayats took over its maintenance and management. The GGP then worked with it for recovery of the interest-free loan provided to the farmer. About 45 Pani Panchayats or lift irrigation schemes were established in 15 years between 1980 and 1985. While forming these, the GGP was sensitive to local traditions and practices, and many schemes were named after the local community or local deity. Such names invoked a sense of belonging in the local community, who also felt that by naming the schemes after their deity, they would invoke its blessings. Using the deity's name also helped to instil a sense of fear and obedience among community members, thus deterring them from misappropriation or abuse of benefits. Later, the GGP also created a cadre of barefoot managers/engineers to supplement the formation of the Pani Panchayat. This cadre was expected to provide technical support, including survey of land and identification of motor requirements. In addition to this, Salunkhe often quoted the saint Sant Tukaram in his speeches and discussions, referring to his description of the drought-like situation in the 17th century to persuade people of his ideas.

At this point, the principles of the Pani Panchayat movement merit a detailed examination. The first principle discouraged lift irrigation schemes for individual benefit. The GGP sought to implement the schemes for cohesive groups of people or communities. These groups mostly consisted of small and marginal farmers. The second principle stated that the quantity of water provided must be based on the size of the family. It discouraged the linking of water quantity in proportion to land. Thus, every household was entitled to water rights for a maximum of 2.5 acres with an allocation of 0.5 acres per family member. Land more than 2.5 acres is expected to be rainfed and not supplied with water for irrigation. This limit was intended to ensure equity in water sharing.

The third principle stated that water rights were not to be attached to the land. If the land was sold, the water rights were transferred back to the Pani Panchayat. This means that if a member of a Pani Panchayat sold his land, his water rights would not be transferred to the new owner of the land but would remain with the Pani Panchayat. The objective was to deter the selling of irrigated land to a private owner who was not a member of the Pani Panchayat. The fourth principle stated that water rights must also be extended to landless persons, who were mostly labourers. This enabled them to exercise their rights to water so that they could cultivate land on a sharecropping and informal basis. Agriculture labourers, working with the Pani Panchayat scheme, were given the rights. The sowing of water-intensive crops, such as sugarcane and banana, was banned on land that received the benefits of the Pani Panchayat. This was to check the use of water and to increase labour-intensive activity for generating employment in the region.

The sixth and seventh principles required 20% of the irrigation costs, including cash contribution, to be borne by community members and the entire scheme to be planned and executed by the beneficiaries. This was to ensure the involvement

of the community and instil a sense of responsibility due to their personal investments in the scheme. It also helped them exercise direct control over the scheme. According to the financial arrangements of the scheme, 50% of the money would be made available through a government subsidy. Government funds from the Drought Prone Areas Programme (DPAP) under the rules for subsidising Minor Irrigation Extension Programme mentioned a cost of 50% for farmers holding less than 7.5 acres and 40% for farmers owning more than 7.5 and up to 15 acres. Farmers from backward classes are entitled to 66% subsidy. The GGP provides 30% of the funds required as interest-free loans for the project. The community is responsible for arranging the remaining 20% of the project cost.

Salunkhe first demonstrated the results of the experiments he carried out on the land leased to him in Naigaon. Inspired by his example, other groups of farmers approached him for help to set up Pani Panchayats. At times, there were legal hurdles. In one case, some big farmers, who owned land near a stream of water, opposed the formation of a Pani Panchayat by smaller farmers. The former were sugarcane growers and were using the stream's water without any restriction. The formation of the Pani Panchayat would reduce their water supply, thereby affecting their crops and the availability of cheap labour. The court case that followed went on for two months and was finally decided in favour of the smaller farmers.

The obtaining of electricity connections proved to be another challenge. The Maharashtra State Electricity Board (MSEB) ignored their applications for power connections, citing reasons of low revenue returns. As a result, the lift irrigation schemes of many villages (Pandeshwar, Kothale, Naigaon, Pimpri, among others) came to a halt due to the lack of electricity. In 1980, the villagers' patience ran out and about ten villages threatened to boycott the elections, unless they were provided electricity for their lift irrigation schemes. The threat bore the desired effect. On 9 May 1980, the villages got an assurance that electricity would be provided in three months. But the promise was not kept. During the intervening period, some 40 lift irrigation schemes were implemented in 20 villages of the Purandar taluka by the GGP. Only four became operational, while the remaining lay idle because of non-supply of electricity. About 500 farmers gathered in Saswad on 13 December 1980 to protest against the state government's failure to provide electricity. By this time, all other work, such as the construction of percolation tanks and the sowing of seeds, was completed as the farmers awaited electricity.

Finally, they decided to march to the Maharashtra legislative assembly, which was holding its session in Nagpur. Small and marginal farmers marched under the banner of the Pani Panchayat movement. They reached Nagpur on 22 December. A small delegation met the then chief minister A R Antulay. Again, promises of providing electricity were made, and once again, they did not materialise. In 1982, after two years of enduring broken promises, Salunkhe decided to take the protests further. He organised several peaceful agitations to highlight the farmers' demands for electricity. The protests, held between 29 April and 3 May 1982, included a water march, water convention, and satyagraha. Workers of Pani Panchayat started mobilising village communities one month prior to the events. To reach as many

people as possible, the workers held meetings and spoke at public gatherings, such as weekly markets and local festivals. The water march started from Saswad on 29 April and headed towards the Veer dam. About 200 people participated in the march. On the following day, at the water convention, Salunkhe shared his thoughts and spoke about the struggles that the movement faced, criticising the government's attitude. After the water convention, 50 people sat in a symbolic fast to draw the attention of the government and the public.

Salunkhe used the movement's magazine to spread awareness amongst the people and the government about these struggles. On 14 July 1982, about a hundred farmers sat on a fast outside the MSEB office in Saswad. The protesters warned that the board's office would be locked unless their demands were met. This led to another assurance being given: 50 electricity connections would be provided by 11 August. This promise, too, was broken. Kalpanatai recalled those times:

> The mobilisation (of the people) was done through our weekly Sunday meetings. The farmers were going daily to the MSEB office and irrigation department offices. We could not get cement because it was a controlled commodity. We had to struggle to get the subsidy also. The scene was, therefore, already set for people's organisation and collective movement.

A meeting of the farmers took place on 2 October 1982. Salunkhe urged the farmers to express their anger and displeasure at the government and administration. At that time, 22 schemes were awaiting electricity connections. It was decided that a satyagraha would be held from 11 October 1982 outside the MSEB office in Saswad.

The satyagraha began peacefully. On 15 October, Salunkhe and his wife, Kalpanatai, decided to start a fast unto death. As soon as this news spread, all sections of society hastened to support it. The Pani Panchayat movement and the struggles it faced received prominent coverage in many newspapers. Students, lawyers, and more farmers arrived at the satyagraha to support Salunkhe and his wife. The police acted on 18 and 19 October, arresting many people and sending Kalpanatai to jail. The indefinite fast was called off with a strongly worded demand for preferential treatment to the Pani Panchayat schemes and supply of electricity. After this incident, the then chairman of the National Bank for Agriculture and Rural Development visited the site of one of the lift irrigation schemes and allotted Rs. 6 million as a "special programme for agriculture" for Purandar taluka. Gradually, electricity connections were provided to the Pani Panchayats. However, by then, the initial enthusiasm of the movement had dampened significantly.

Disillusioned by his experiences, Salunkhe formed a political party on 1 January 1983. He began propagating the principles of the movement more widely and decided to contest the state assembly elections in 1985. However, he suffered a severe defeat in the elections. Reflecting on the loss, Kalpanatai felt that while Salunkhe's party held meetings to understand the needs of the community, they lacked the aggressive infrastructure needed to get votes in a political battle. While

they fared well in regions where the Pani Panchayats existed, in other areas, there were powerful lobbies who felt threatened by Salunkhe and, hence, worked hard to ensure his defeat.

Meanwhile, Salunkhe's engineering company, Accurate Engineering, became debt ridden. Labour issues arose, and a lock down of the company was announced. For some time, Salunkhe concentrated on rebuilding his business. At the same time, he began re-advocating the principles of the Pani Panchayat movement and propagating organic farming in 1995–96, while starting work with the tribals in Amaravati district.

In the 1990s, Salunkhe devoted considerable time and effort to advocate the movement on various platforms and at seminars, including the Centre for Science and Environment. Soon, Salunkhe and his concept started getting attention at the national level. He was engaged by the Andhra Pradesh government, and in 2002, Salunkhe served as an advisor to then chief minister N Chandrababu Naidu. He helped design a Pani Panchayat in Khammam district for irrigating 900 hectares for 400 families. He also facilitated interactions between beneficiaries of the Pani Panchayats in Maharashtra and the farmers of Khammam district. Salunkhe died on 23 April 2002.

Another notable upscaling of the Pani Panchayat initiative was in Odisha. The institutionalisation of participatory irrigation management by water user groups was facilitated by the Pani Panchayat Act of 2002. It was followed by the Odisha Pani Panchayat Rules, 2003. The statewide act encourages farmers to form partnerships for secure distribution of water and its economic utilisation to optimise agricultural production as well as to protect the environment and to ensure ecological balance (Sahu, 2008).

Currently, the activities of the GGP revolve around organic farming and propagating the concept of community lift irrigation in the Purandar area (in the outskirts of Pune). The organisation is not interested in increasing the scale of its work. Instead, it wants to concentrate its efforts on a local level. According to Kalpanatai, "the concept of collective use of water, or its rationing, is yet not fully acceptable to people . . . policies do not support collective management of water resources."

Leadership Outcomes

The Pani Panchayat movement has been in decline. While it worked well for small and marginal farmers, larger farmers had enough capital to develop irrigation systems using their own resources. The principles on which it was based were mostly followed. The principle of giving water rights on a per-person basis (half acre per head with a maximum of 2.5 acres per family) was mostly adhered to. However, some studies pointed out loopholes in the definition of households that were exploited to benefit joint families. Another principle of extending water rights to the landless remained only in theory. Given the economic condition of a landless family, it was difficult for them to raise money to meet the mandatory share of 20% eligibility for membership in a Pani Panchayat. Further, this right

was non-tradeable, meaning that the member could not sell his share to raise money for any need. It was envisaged that sharecropping would help the landless to exercise their water rights. But there is nothing on record to show that this has happened.

The early Pani Panchayats had sufficient time to mature and to sustain their operations and maintenance of the system on their own. The only tie between them and the GGP was the repayment of loans taken from the latter. Once the loans were fully repaid, there was little reason to continue the relationship. The difficulties faced in getting power connections and the constant struggle to ensure a reliable supply of the same were also major demotivating factors. The changing objectives of the founder and the GGP accelerated the decline. While there were few new projects, existing ones stagnated. With Salunkhe's death, the Pani Panchayat movement lost its guide and torchbearer.

Despite being lauded by many as an important achievement in community-based water management, this movement's principles failed to become part of the larger policy framework in the state. The movement remained a local phenomenon. The wider implementation of its principles could have disrupted the system of water management and cropping patterns. However, the political cost might have been heavy. Alas, the experiment of giving communities control over their resources could not achieve its potential.

Artificial Glaciers to Enhance Water Availability in the Cold Desert: Iceman of India, Chewang Norphel

Ladakh is one of the northernmost regions of India, located on the western part of the Tibetan plateau, with an average altitude of over 3,500 metres. Since it is in the rain shadow region of the Himalayas, it receives scanty rainfall. Because of the extremely low temperatures and low water availability, the terrain is arid and inhospitable. Most people in Ladakh depend on farming, as a means of livelihood, with a heightened requirement of water in April and May. Earlier, the snow at lower levels would melt during these months and provide water for agriculture. However, due to global warming, the snow remains confined to the peaks, and melting snow is no longer available for irrigation during the crucial farming months. In the late 1980s, Chewang Norphel, a retired civil engineer proposed a solution to address this problem. Norphel, also known as the Iceman of India, introduced the concept of artificial glaciers to capture flowing water during winter, in the form of ice, near the farms. Come April and May, these artificial glaciers melt, thus, providing water for agriculture.

Leadership Emergence

Chewang Norphel was born in 1936 into a farming family. As a young student, he had to manage farming duties alongside education, often rising at 4 a.m. to graze the family's cattle before going to school. He would cook and clean for his teachers

in lieu of fees for his education. After completing his engineering from Lucknow, he returned to Ladakh to serve in the rural development department of the state government.

Norphel served the rural development department for 36 years. During his stint there, he was responsible for constructing roads, septic tanks, bridges, and irrigation systems. Due to the rugged terrain and lack of skilled labour, it was extremely challenging work. At times, Norphel would do the masonry work himself while training a few villagers to help him. He would even carry heavy loads on his back and travel long distances on foot to fetch construction materials. He said this:

> Despite being a part of the official machinery, I never considered myself to be an official and was always working with the labour. Having worked closely with them, I managed to build a rapport with them as well as the locals in the many villages of Ladakh, where I was posted. I earned their respect and willingness to accept my suggestions, for the work I was implementing, as part of rural development. We used to have food together and discuss the problems of the village on a common platform. I used to make them aware of the benefits of the activities, and how their contribution would help the project and eventually, the whole village. There is hardly a village in Ladakh, where I have not made a road, a culvert, a bridge, a building, an irrigation system, or a zing (a small water-storage tank fed by glacial meltwater).

One incident was crucial in helping Norphel gain the confidence of the community. In 1966, he was working in the Zanskar region (Kargil District). A suspension bridge in the region, which connected it to the rest of the state, would often get washed away during the rains. Norphel redesigned the bridge and personally helped in its construction. He overcame several challenges, such as lack of funds and the shortage of construction material and labour. He lobbied with government departments for unused materials to use for this project, even fetching materials required for construction by walking miles and, at times, carrying them on his own back. When people saw this, they joined him.

A local resident whose father was trained to do masonry work by Norphel while building the Zanskar Bridge recalls as follows:

> He came as an angel in our life. We were completely cut off from the rest of the world. He improved our life by constructing the bridge all by himself, carrying loads on his back, sleeping near the site, and working day and night. I, and the entire village, are indebted to him.

While visiting villages for his work in rural development, Norphel noticed that one of the biggest challenges in rural communities was that of water scarcity. Due to climate change, there was lesser snowfall, and glaciers were restricted

only to the mountain peaks. As a result, there were no lowland glaciers that could melt and provide water during the sowing season in April and May. The glaciers in the mountain peaks only provided water in June, disrupting the usual cropping cycle and leading to poor yields and reduced income for farmers.

Initially, to solve water shortage, Norphel tried several ideas such as the construction of irrigation channels and reservoirs. In the absence of motorable roads, it was difficult to access material and labour, and the impact of these efforts was limited too. One day in 1987, Norphel observed water from a tap forming a sheet of ice over the ground, while water was freely flowing in the surrounding areas. He realised that slowing down a stream of water is likely to freeze it much faster. This frozen water can act like an artificial glazier which can provide water during the months of April and May.

Norphel started his work in the village Phuktse by redirecting the course of water and reducing its volume and speed, thereby, making it collect under a hill. He recollects as follows:

> Since I had travelled to most of the places in the region during my years in service, I was aware of the topography of the entire region. . . . I thought areas in the shadows of the lower ranges could be used to develop glaciers. I tried the technology in Phuktse because the area is small. I could then determine whether the idea was feasible or not.

Leadership Practices

One of Norphel's unique qualities was his willingness to work with his own hands. He, thus, proved a great role model to the community, often embarrassing the youth who refused to do demanding work.

Norphel's first step in Phuktse was to discuss his plans and its benefits with the community. Since the villagers were in dire need of water for irrigation to sustain their crops, they agreed to support his plan. The work on constructing a glacier started in October, when the villagers diverted the glacial streams from the main stream to shaded areas of the hill facing the north side and created embankments in the form of steps to slow down the velocity of water. Here, the winter sun was blocked by a ridge or a mountain slope. The water flow was slowed down further by placing narrow iron pipes in its path, which also enabled heat from the water to quickly dissipate through the metal pipes.

The velocity of the water was reduced by constructing artificial retaining walls and obstructions in the form of bunds, which hastened the freezing process. The result was an artificial glacier at the other end. These glaciers, located at a lower altitude of 13,000 feet in comparison to the original glaciers at 18,000 feet, started melting at an earlier time than the natural ones. At the onset of spring (March–April), melting water from these artificial glaciers were channelled back into the streams to feed the fields of farmers ready to begin cultivation in the villages below,

after which the melted water from the natural glaciers higher up provided water from June onwards.

The pilot project cost Norphel Rs. 19,000, which he managed to get from the funds available with the rural development department. The community provided voluntary labour. The cost was less, as it was piloted in a small area, using locally available materials. The experiment proved beneficial for the farmers, and they started to cultivate more land. Reflecting on his work, Norphel said this:

> The biggest challenge was to make people understand the concept and its feasibility. Everyone would laugh at me, even calling me crazy. For me, it was about my larger purpose, which was to improve the life of the farmers. When, after one year, I visited Phuktse village and asked the community, "Do you think this technique is feasible?" They happily said yes, it is feasible and very beneficial to us. The villagers then helped me to increase the length of the glacier to 2 kms. In the end, it was a big success, and people approved of it.

After the successful implementation of the artificial glacier technique in Phuktse, Norphel went on to build a few more artificial glaciers. He got funds from the Sadbhavna project of the Indian Army in Jammu and Kashmir, and the Department of Science and Technology (DST).

Another challenge for Norphel was maintaining the structures after implementation. To ensure this, the community had to be a key stakeholder. He used the community's knowledge of water availability in streams during peak winter to select the site of the artificial glacier. Norphel narrated his approach:

> Whenever I visited a village, a meeting with the community used to be organised to gauge the problems faced by them. Water scarcity used to be the major issue raised. As a solution, I proposed artificial glaciers. I also mentioned about the limited funds availability and thus, we encouraged them to volunteer as labour. At that time, water scarcity was chronic and without any alternative means of livelihood, such as tourism and working for the army, which many people are engaged in now, it was easy to convince the community. They were eager to help, knowing the benefits they could get. We succeeded in getting their support, from the designing phase to taking over its operation and maintenance. We needed to determine how much water is available in the stream during peak winters. The community is aware about the quantity of water in the streams in all the seasons because they live along the course of the stream and thus, we needed their knowledge and guidance. While selecting the sites, we preferred shallow/shadow areas, where there is no direct exposure to the sun. Here, also, the villagers helped us.
>
> Involving the whole village in the project would have been impractical. So, I explained the whole project to the villagers, its objective and functioning, and the role of the funders to the villagers. It was then their (villagers')

> responsibility to identify individuals with the requisite skill sets to meet the project requirements. The individuals selected by the community were personally trained by me to oversee the project. When funding agencies like DST made visits, they would go to the project site and interact with the villagers before sanctioning the project.

Norphel retired from service in 1995 and joined a Leh-based NGO, the Leh Nutrition Project (LNP), as project officer. This was when the Watershed Development Programme was initiated in Ladakh. The programme focused on integrated rural development, along with improving irrigation facilities, farming innovations, and planting trees. Through LNP, Norphel managed to obtain funds to implement his artificial glacier technique. Until his retirement from LNP in 2011, Norphel, along with local communities, had built glaciers in various locations in rural Ladakh, including the villages of Mud, Sharasharmos, Igoo, Nang, Stakmo, Saboo, and Umla.

During the flash floods of 2006, many of his structures were destroyed. The 82-year-old resiliently continues his efforts to help the people of Ladakh. Funds were used to rebuild the glaciers damaged in the floods, while providing training in building artificial glaciers to NGOs. It has not been an easy journey for Norphel as he had to face multiple challenges on many fronts: community participation and the unavailability of funds.

Leadership Outcomes

After a successful experiment in his own village in 1987, Norphel continued his work, creating about 15 glaciers. Over the years, there have been several changes. Primarily, farming has ceased to be a lucrative occupation, and it is difficult to find people who are willing to work on projects involving irrigation. Many people have also set up private borewells to deal with the problem of water shortage. While these borewells are a short-term solution, in the long term, they deplete groundwater. Artificial glaciers, in contrast, recharge groundwater by allowing better seepage into the soil.

Until the 1960s, Ladakh was quite inaccessible, and it was difficult to have access to even basic tools for building roads and other infrastructure. Artificial glaciers were not a proven technique until the 1990s. For the first few projects, in the late 1980s and early 1990s, Norphel got some funds from the rural development budget. Between 1987 and 1995, he approached the Indian Army's Operation Sadbhavana projects for funding small-scale projects, supported by the local population.

In 1998, the Centre for Science and Environment prepared a documentary on Norphel and his work. Norphel was presented the DST's Rural Development Award in 1998. The award and documentary got him media attention. He began working with NGOs like Ladakh Environment and Health Organisation, and Leh Ecological, to raise funds for building artificial glaciers. Frequent visits to Mumbai, to attend workshops and to present his work, brought him in contact with the

Tata Trusts which now provides funds to the aforementioned group of NGOs for building artificial glaciers. In 2015, he was awarded the Padma Shri, India's fourth highest civilian award. Even though Norphel is no longer officially associated with the LNP, he continues to be involved in training NGOs. He is planning to prepare a training module and a manual with which people can make artificial glaciers without his direct help.

Innovation for Scarcity to Self-Sufficiency: Chauka System by Laxman Singh

Laporiya village is situated about 80 kilometres from Jaipur City. In the 1970s, the village faced severe water scarcity due to drought. Poverty, conflicts, and migration were constant factors that the villagers had to contend with. It was during this time that Laxman Singh, an 18-year-old descendent of one of Rajasthan's royal families, realised that the only way out of the problems faced by Laporiya was to deal with the water problem and make the village agriculturally prosperous.

Leadership Emergence

Laxman Singh belonged to a family which once ruled Laporiya, but which, since independence, had switched to agriculture. He grew up seeing the pasture lands disappear and his village become drought prone. He travelled extensively within and outside Rajasthan to understand the means of water storage and conservation. He would also discuss the traditional methods of water conservation with village elders. In his personal life, he practised high moral standards. During his wedding, he announced that he and his family's subsequent generations would neither give nor take dowry (Ashoka, 1998). This was radical for the social context he inhabited.

Singh was concerned about his once green and vibrant village that had turned into a barren land. The lack of water, food, and means of livelihood led to a sense of frustration in the villagers and spawned unwarranted disputes amongst them. Singh recounts as follows:

> When I was young, about 16–17 years old, the (local) schools taught only up to class five. Students had to shift to Jaipur to study, which is what I did. I joined Podar School in Jaipur, returning to Laporiya only during vacations. With every visit, I could see that my village was declining further. The main lake was parched, the village leadership was incompetent, and people were fighting amongst themselves. To give an indication of how bad it was, there were 117 civil and land ownership (court) cases filed in 1976.
>
> Soon, it became a pattern. People forgot that there was work to be done in the village and all discussions and activities in the village were centred on these cases. Laporiya was no longer a peaceful and safe place to live

> in. People living in one locality would not visit another for fear of being assaulted. It became commonplace to damage or destroy the crops and/or property of people you did not like. Indeed, development had stopped completely.

Troubled by this state of affairs, he and his friends discussed these issues with the villagers. One elderly resident proposed that their problems would be solved if they repaired a village lake that had been dry for a long time. Singh thought about this and realised that it was not an easy task. Yet along with his friends, he decided to mobilise the community. He used his family's name and influence to arrange for a meeting with the villagers, where he told them, "either cooperate in repairing the lake or leave the village. The project is for everyone's benefit."

People were willing to work on restoring the lake, but they wanted compensation for their work. Initially, Singh was supported by only one of his friends and the village priest. But in less than a year, almost the entire village joined the initiative (Ashoka, 1998). He persuaded them to put aside their demands for the sake of the community. He recalls as follows:

> We told them, "You've lived in this village. You are not an outsider. Your family has been living here for centuries, and you will continue to live here." We told them bluntly, "Everyone must be present at the lake site daily. No matter what caste or religion you belong to, you must be there and work. If you can't go, tell us!"

People helped repair the broken embankments, repair percolation tanks, and desilt the community pond. The spirit of cooperation broke down some of the caste and class barriers. Encouraged by this, Singh decided to form an organisation and called it the Gram Vikas Navyuvak Mandal Laporiya (GVNML) meaning youth group for village development.

The organisation helped address several of the problems in the community. For example, after the lake was built, some people started drilling into the lake to draw water into their fields. When the organisation approached them, it persuaded them to change their ways. It also helped to resolve many of the court cases and disputes through dialogue. Gradually, the lake was recharged, and the water levels in the wells increased.

Leadership Practices

Singh's initial success, in recharging the village lake and setting up the GVNML, established him as a leader in the village community. He continued his travels in Rajasthan to study more about traditional systems of water harvesting. He was especially interested in learning from the traditional engineers. Based on his travels and interactions with traditional experts, he discovered the chauka system, also known as the Laporiya Square, in the late 1980s.

The GVNML began its work in 1977 and was registered in 1986. It worked with rural communities to empower them and develop the arid regions in the state. Water was stored in a network of community ponds, lakes, and earthen percolation reservoirs prepared the villagers. The villagers who had the best knowledge of their terrain were given freedom to decide the locations of these networks and the water paths. From these networks, water was diverted into farms and pastures through canals, spillways, and aqueducts. The embankments were covered with plantations and, at times, served as roads (Ashoka, 1998).

Singh was a firm believer of building on local culture and indigenous traditions, not only for the generation of ideas for environmental conservation but also for their popularisation. Singh and his organisation held several social events and padayatras to review the work done in villages and participated in traditional religious ceremonies involving the worship of lakes.

All the GVNML's projects were supported financially by community donations and completed using voluntary labour. It provided technical assistance when needed, organised training programmes for youth, and also supplemented resources when funds were short. The system was democratically managed and maintained by village governing councils (Ashoka, 1998). Over a period, the programmes of the GVNML shifted from water management to community development and securing of people's rights. It partnered with several other community-based organisations to secure people's right to food, right to information, and right to education.

In 1986, the GVNML initiated a programme to revive the pastures in Laporiya. After discussions with experts, they implemented the chauka system. This involved the construction of small water harvesting pits with shrubs around them. The water from the chaukas (square-shaped embankments) drained into a channel that, in turn, emptied into a pond which provided drinking water to cattle. The GVNML took up similar projects to construct rainwater harvesting structures in various districts. These structures helped improve agricultural productivity.

The chauka is a technique to conserve soil and moisture, and used in degraded pasture lands in Rajasthan. As part of this technique, people dig a network of squares of a few metres and less than one foot deep. In a large piece of land, the chaukas are dug all around the edge of the area with two-foot-high barriers. The structure helps check the flow of water post rainfall, thus, significantly reducing soil erosion. When water levels in a chauka reach nine inches, rainwater flows to the next one, constructed at a level lower than the previous one. This system retains soil moisture well after the monsoons and rejuvenates dry pasture lands. It captures and diverts rainwater for groundwater recharge and future use into low-lying water tanks and ponds. The system is suitable for arid and semi-arid areas. The chaukas have enabled the conversion of dry wastelands to fodder rich areas. They have also increased the diversity of medicinal herbs grown in the area and the avifauna.

The GVNML encourages organic farming and helps farmers adopt bio-compost and bio-insecticides, instead of pesticides and chemical fertilisers. It also organises training for farmers to educate them about sustainable farming practices, using techniques such as compost, seed selection and treatment, and weed control.

Farmers are provided advice, through information centres in each village, on what crops can be grown, suited to the local climate. These centres also help people apply for government subsidies. The GVNML has also contributed in building awareness about reproductive health and forming village health groups in 200 villages of Jaipur, Madhopur, Pali, Sawai, and Tonk districts. It has a night school where children, who work in the farm during the day, can study and has been working on child rights since 1984.

Leadership Outcomes

The chauka has been thus far implemented in about 65 hectares with the voluntary contributions of villages, both in terms of money and labour. Due to an increase in the water content of the soil, the villages can harvest rabi crops without irrigation. The pastureland ecosystem is diverse and full of different types of grass and fodder trees. Several of the plants have medicinal value which help livestock keep good health. This biodiversity attracts several bird species, some of which are near-extinct in other parts of Rajasthan.

Due to Singh's model, barren land can now yield two crops annually. This has raised the income of the villages, and the greenery has made livestock farming a viable occupation. Laporiya is less drought prone and can easily sustain itself during low rainfall. Due to the availability of food and fodder, the village is self-sufficient. The water table in the village is 15 to 40 feet deep, as compared to 500 feet in the nearby areas. This is mainly due to the collective efforts of 350 families. The GVNML now focuses on integrated village development and rebuilding of social institutions. Several nearby villages have copied Singh's model, and he has received several awards in recognition of his good work.

Even though he claims that his efforts are for the larger good of the entire community, an interaction with a group of villagers from a caste considered low in the region revealed a different view. This group of people maintained that they did not benefit from the chaukas since they were not allowed to take water from the small ponds and lakes, owing to their lower caste status. Singh denies such claims, insisting that his work is inclusive and meant to benefit everyone. These perceptions likely arise from deep-rooted caste differences and local norms that exclude the lower castes.

Analysis

The five cases described here provide some insights into individual initiatives for disaster resilience in India.

Leadership Emergence

Of the three forms of legitimate authority—rational, traditional, and charismatic—we find that all five individuals have varying levels of charismatic authority. Rajendra

Singh and Vilasrao Salunkhe are examples of pure charismatic authority. Both were highly trained professionals who voluntarily chose to stay in a village and helped deal with the issue of water shortage. Both individuals were successful in their initial attempts at helping the villagers and that further enhanced their charisma.

Balbir Singh and Laxman Singh had traditional authority, with some elements of charisma. Balbir Singh, the head of a spiritual group, and Laxman Singh, a member of the royal family, both used this traditional authority to persuade others to follow them in their mission. Whereas Chewang Norphel, an engineer in the state government, had rational authority, which gave him the legitimacy to start his initiatives as well as access to the know-how and material resources. He later built on his rational authority through his proactive behaviour.

The other framework for understanding leadership emergence is through social identity. Of the five cases, three leaders emerged from the same social class as their followers. Balbir Singh and Chewang Norphel were highly prototypical of their group. Balbir Singh was from the same community, and Chewang Norphel belonged to an orthodox farming family. Laxman Singh belonged to the same village as his followers but was from a slightly higher social class. In contrast, Rajendra Singh and Vilasrao Salunkhe were outsiders, in the sense that they did not belong to the villages where they started their initiatives.

Evidence of heroism and self-sacrifice has been found in all the cases studied. When Rajendra Singh shifted to the village, he had to live in a temple and was hands-on with building johads. Similarly, when Salunkhe shifted from Pune to settle in Naigaon, he worked as a farmer for one year. Balbir Singh showed heroism by jumping into the polluted river at considerable risk to himself and then began to clean the river with his bare hands. Similarly, Chewang Norphel was also hands-on with his initiative. He would even trek long distances at high altitudes and share the living conditions (eating and sleeping) with the labourers. Finally, Laxman Singh also showed elements of self-sacrifice by rejecting the traditional practice of dowry and announcing that no one in his family would ever give or take dowry.

Leadership Practices

The cases revealed the five interdependent leadership practices of relationship-building, narrative, strategy, structure, and action (Ganz & McKenna, 2017), which is described in the following sections.

Relationship Building

In all five cases, the individual leaders reached out to others, who were close to them and who could help implement their ideas. Rajendra Singh was supported by Meena, who offered his land for the construction of the first johad. Salunkhe was supported by government officials (both current and retired), and Balbir Singh by members of the pollution control board as well as non-resident members of his community for funds. Laxman Singh networked with other landlords in the community, while Norphel used his connections as a government employee.

Narrative

Except for Chewang Norphel, all the initiatives have instances of an emotional narrative to drive involvement and participation in the initiative. For example, Rajendra Singh would say that "if water is provided, all other things will inevitably follow; other things are available in the market, but not water." Similarly, Laxman Singh would stress that "planting trees is our duty; plant trees and bring prosperity to our village; plant trees and save parched land from devastation." Salunkhe quoted Sant Tukaram to persuade the villages to come together to alleviate their problems. Similarly, Balbir Singh used references from the Guru Granth Sahib, including "first, there is life in the water, by which everything else is made green" and "It's not just the river, but everything is sacred. Everything related to any kind of life is sacred and needs to be protected and preserved."

Hence, two broad themes emerged within the narratives; the first theme spoke about the importance of the environment for its own sake, and the second used religious and cultural references to justify environmental protection.

Strategy

In all five cases, we find that the leader has provided a technical solution to their respective communities' problems. The solutions may emerge from various sources. In the case of Rajendra Singh, the solution, in the form of constructing johads, was merely the revival of a traditional practice. In the case of Laxman Singh, the construction of rectangular pits, or chaukas, was adapted from a practice that is common in Assam. All the others, that is, Salunkhe, Norphel, and Balbir Singh, seem to have developed innovative solutions for community problems. Hence, it appears that strategy development is informed in three ways: reviving traditional practices, transplanting (or adapting) practices of other places to local needs, and developing solutions locally.

Structure

Of the five initiatives, four had an organisational structure. Rajendra Singh's organisation Tarun Bharat Sangh and Balbir Singh's Nirmal Kuteya were already in existence before they joined them. In contrast, Salunkhe and Laxman Singh established their respective organisations, Gram Gaurav Pratishtan and Gram Vikas Navyuvak Mandal. Finally, Norphel started with rational authority but did not create an organisation of his own.

Leadership Outcomes

The routinisation processes, in varying degrees, have been observed in four of the organisations, which were mobilised to build disaster resilience. Since Norphel did not set up an organisation or align with an existing one, the question of routinisation did not arise. High levels of routinisation have been observed in two of the

cases, those of Rajendra Singh and Balbir Singh. Both organisations had developed rites, ceremonies, and symbols to remind followers of their purpose. In both organisations, there was an emphasis on service (shramdaan). In addition, there were numerous documents and videos on the activities of the charismatic leader. In the case of Rajendra Singh, his son has taken over some of the activities. However, in the case of Balbir Singh, the successor has not yet been named. In the cases of Salunkhe and Laxman Singh, there have been some attempts at routinisation, but these do not seem to have borne fruit, as the evidence shows that both movements are declining, in terms of their impact and influence.

All four organisations have received wide recognition from the government and society. In terms of engagement of members, the organisations headed by Rajendra Singh and Balbir Singh continue to do well. However, the engagement levels of members in Laxman Singh's organisation are limited. Engagement is even lesser in Salunkhe's organisation.

The development and emergence of new leaders are like the members' engagement levels in the respective organisations. All four organisations have expanded into newer areas, based on the emergent needs of the communities that they serve. Rajendra Singh's organisation now focuses on education and women's empowerment, Salunkhe's propagates organic farming, Balbir Singh's has expanded to education and development activities in addition to ecological initiatives, while Laxman Singh's has widened to include livestock, skills training, and development of newer crops. In terms of inclusiveness, each organisation shows different levels of inclusion of diverse segments of society.

Conclusions

The five cases together paint a picture of leadership emergence, leadership practices, and leadership outcomes. While there are some inconsistencies in the findings, there are also several points of congruence. We found that the charisma emerged as a result of the combination of the individual's traits, the presence of a crisis, an idea that could address the crisis, some followers, and initial success. We also found elements of heroism and self-sacrifice on the part of the leader to gain acceptance in the initial stages.

As the movement took root, we found evidence of the five leadership practices: relationship building, narrative, strategy, structure, and action. Leaders built networks with influential members of the community, had a narrative that leveraged cultural ideas, developed a technical strategy to address the crisis, and developed an organisational structure to enable action.

The outcomes of the initiatives were evaluated in terms of their achievements and the extent to which they were likely to be sustainable even after the leader had exited. An important criterion for sustainability was the extents to which the charisma of the founder was routinised and the movement dynamically responded to the changing needs of the community.

Note

1 A johad is an artificial concave earthen pond used for rainwater harvesting and water storage. An anicut is a masonry check dam, constructed across a stream.

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4

BUREAUCRATIC AND POLITICAL LEADERSHIP FOR DISASTER RESILIENCE

Theoretical Discussion

The survival of postmodern society relies, to a large extent, on an array of institutions operated by anonymous actors. These individuals are bound by their duty towards society and, by default, are responsible for controlling the risks that it faces. A disaster triggers a surge in popular disappointment and has the potential to offset trust in the ability of these individuals to perform their core duty. This crisis of legitimation highlights the need to extend scholarly inquiry into the role of institutions, including the state, in relegitimising and reinstating essential social routines in the backdrop of a disaster (Horlick-Jones, 1995). In complex social systems, such as the state, radical changes are often produced by actors within the system (Schneider et al., 2011). The key actors or agents of change within state institutions or the public sector are political actors and career bureaucrats. Political actors are likely to innovate in the context of disasters or crises that lead to visible public failure. But given their usually shorter stints, political actors are less likely to take up innovations to comprehensively address disaster risk reduction, resilience building, or long-term disaster recovery needs. Keeping this in view, it becomes imperative to extend academic exploration into the role of political actors and career bureaucrats, as agents of change, embedded within the state and bureaucratic systems and their potential for transformative change towards disaster resilience.

Public sector institutions are carefully assembled bureaucracies, designed to perform their base tasks with stability and persistence while, simultaneously, withstanding any change or disturbance to these tasks (Wilson, 1989, as cited in Borins, 2002). Crisis and disasters—emanating from an unusual interplay of unforeseeable, indefensible, mise en scène factors—generally call for innovative responses because routine bureaucratic functions are inadequate to respond to the non-routine demands posed by disasters. Disaster and its management pose unique challenges that warrant the efficient creation and allocation of resources in public interest. The market, the firm, and the nation state are institutional devices for resource creation

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and allocation globally. The nation state plays a significant role in the creation and apportionment of resources. However, a systematic investigation into the subject of resource(s) governance in the public interest by these alternate forms of institutional devices and their collective action, especially in the context of disasters, is largely absent from contemporary literature (Klein et al., 2010). In addressing this gap, this thematic section focuses on the existing theoretical and empirical understanding of public sector actors in the context of disaster risk reduction and resilience-building initiatives in India.

Tracing the changing role of actors in theoretical discussions of policymaking and implementation, this section places the current study within the public policy discourse. Focusing on three main traditions within the Weberian approach, the primary purpose is to identify theoretical elements that could be retained in the context of disaster resilience leadership. Later in the section, an attempt has been made to explain a rather unconventional choice of conceptual framework and establish the relevance of the public entrepreneurship framework for the current study. Dwelling further on the leadership theme, the second subsection develops the historical context for the study. Rooted in van Wart's landmark reviews on administrative leadership in 2003 and 2013, it traces the evolution of public leadership literature within mainstream leadership literature. Highlighting the main debates, the primary purpose has been to arrive at a definition of public sector leadership for the current study. Moreover, this historical review brings to the fore the richness of literature on political and bureaucratic leadership that has been developing in the shadow of private sector leadership.

The third subsection reviews the available literature on public sector leadership during emergencies, crises, and disasters, building on existing gaps to guide the exploration. It familiarises readers with the re-emergence of transitional leadership concepts in the emergency and crisis management literature.

Role in Public Policymaking and Implementation

The academic discourse on public administration and management largely agrees on three archetypes within the Weberian tradition. Among these, the public administration paradigm and its hegemony over academic discourses is noticeable, since the late 19th century through the late 1970s and until the early 1980s. With the unitary state at its core, this paradigm investigates the cyclical process of policy formulation and enactment, with an implicit assumption that the policymaker and the administrator are distinct entities. Some scholars within the paradigm have been able to manoeuvre their path around this divide: for instance, Lipsky's 1979 study of street-level bureaucrats. Yet they have retained the hierarchical line management and bureaucratic tradition at the core of their engagement. Both the welfare state and the public administration paradigm came under heavy criticism in subsequent years (Chandler, 1991; Dunleavy, 1985; Ostrom & Ostrom, 1971; Rhodes, 1997). Among others, its inability to understand the different influences on public policy implementation has been pointed out as its primary limitation (Osborne, 2006).

This, in turn, paved the path for a paradigm shift in approach alongside the arrival of Hood's (1991, p. 3–19) prominent work on the "new public management" (NPM).

Although there are disagreements on the existence of NPM as an independent paradigm, its impact on academics, policy, and practice cannot be overlooked. Emerging from the neoclassical school of thought, the paradigm derives heavily from the public choice or management theory. Unlike the public administration paradigm, the NPM theory believes in a disaggregated state, where policy implementation occurs through independent service units that compete with each other. It focuses on intra-organisational management, based on the efficiency of competition and the marketplace. It propounds organisational distancing between policymakers and implementers (in contrast to interpersonal distancing in the case of public administration), and encourages entrepreneurial leadership within public service organisations. Though the NPM paradigm had the capability to comprehend the dissimilarity of influence within public policy implementation, its treatment of the policy process as a mere backdrop, within which tasks pertaining to public management play out, makes it ambiguous (Osborne, 2006). Both the paradigms seem to have lost their appeal within the larger context of an increasingly pluralistic world. As Osborne (2006) explains, the failure to embrace the changing nature of public sector organisations, which are now situated within the public, private, and voluntary sector, have forced them to remain largely unidirectional in their approach.

There has been significant development within academic scholarship to address the limitations of both the paradigms (Bouckaert et al., 2010; Christensen & Lægreid, 2007; Pollit & Bouckaert, 2004), but it was Osborne's (2006, 2010) work that firmly established the developments as a new paradigm. Firmly grounded within organisational sociology (in particular, organisational social capital within the organisational strategy [Tsai, 2000]) and network theory (Ouchi, 1979; Powell, 1990), the new public governance paradigm accedes to the flaked nature of public management that has been popularised in the 21st century. However, it expands the ambit of research into developing and implementing public policy within the setting of a plural (multiple actors) and pluralistic (multiple processes) state (Haveri, 2006). It recognises the interrelatedness and importance of both the policymaking and implementation processes. It carefully articulates the ideation and upkeep of inter-organisational linkages by leveraging trust, relational contracts, and assets (Bovaird, 2006; Osborne, 2006; Teicher et al., 2006). In spite of being identified by varying terminologies, like 'new governance' (Rhodes, 1997), 'new public governance' (Osborne, 2006), and 'public governance' (Skelcher et al., 2005), the intrinsic characteristics of all these generally point to a similar shift in ideology (Runya et al., 2015).

Ansell (2008) has claimed a similar transition in governance with the rise of 'network governance', a decentralised and pluralistic governing process that increases the involvement of multiple actors (state and non-state) by coordinating through networks. Similar to the public governance paradigm, scholars have

argued that network governance provides an alternative to the hierarchy—markets dichotomy in public administration (Lewis, 2005). Contemporary scholars like Osborne (2010) and Klijn and Koppenjan (2012) have been able to say, with some conviction, that this new public governance paradigm is built, to a large extent, on the governance network theories. These theories shot into popularity around that time to counteract the rise of the new public management paradigm. They derived their essence from indispensable concepts like interconnectedness and interaction of diverse actors (Agranoff & McGuire, 2003; Klijn & Koppenjan, 2012; Mandell, 2001) and the institutionalisation of relationships between actors, through interactions and management of these interactions, to ensure efficiency within the network. Thus, there can be a general agreement that new public governance and network governance share uncanny conceptual similarities.

More recently, the contribution of network governance to collaborative innovation has received some academic attention. Enhancing network formations have always been an important part of governmental innovation policies, for instance, as in Teece (1992). The formation and maintenance of innovation networks between the private firms, the government, and external think tanks have been studied extensively, as a prerequisite for improvement in the innovation capacity of a region (Dente et al., 2009; Lundvall, 1985; Von Himpel, 2007). More recent studies have looked at innovation to the level of subsystems within society, especially in the formation of networks and collaborations to transitions towards sustainability (Koppenjan et al., 2011). Unlike the tendency of treating innovations as singular acts of enterprising public managers, the network governance theories conceptualised collaborative innovations as a more viable alternative. In contrast to the more popular academic views within the policy design and execution discourse, for the latter, public sector innovations could be comprehended through the concepts of collaboration, identifying innovation networks and meta governance strategies (Considine et al. 2009; Hartley, 2005; Klijn & Koppenjan, 2012). The concepts of agents of change, entrepreneurs, and innovators have evolved from the broader school of transformational leadership, which itself lies within the broader public management paradigm. Therefore, these concepts carry some of its intrinsic limitations.

In this study, we consciously place ourselves among the followers of Hicklin and Godwin's (2009) observation that cross-fertilisation between the theories of public policy and concepts of public management is quintessential. Such an amalgamation grants finesse in comprehensively evaluating the role of bureaucrats and politicians in the areas of networking and managerial capacity. Our attempt here has been to understand both the individual as well as the kind of relationships that one builds and maintains within one's networks. Therefore, we have converged elements from both the entrepreneurship and the new public governance frames to understand leadership within the public sector. Focusing on the actor, the study has drawn more from the entrepreneurship literature rather than the leadership styles and traits literature. As leadership is no longer restricted to a singular entity (person or position) but increasingly conceptualised as a complex web spun with different entities, the understanding of transformational or change-based leadership

has become necessary for organisations within an emerging, non-traditional professional domain as emergency management (Springer, 2009). This holds true for the sector of disaster management as well. The public network governance frame has provided the necessary theoretical guidance to help understand the networks that public sector leaders create and sustain for building disaster resilience within state initiatives.

Leadership in the Public Sector

In the early 20th century, the mainstream leadership literature was primarily dominated by the traits theories. Under the growing influence of the humanist or the human relations revolution, these simplistic theories served as an alternative to the great man styles that held popular fancy at the time. This was displaced by Ralph Stogdill's (1948) work, which brought to the forefront the importance of situational context in leadership studies. According to van Wart (2003), the situational perspective formed the basis of most scholarship till the early 21st century, and public sector sites were frequently studied, but no significant perspectives emerged. It is Selznick's (1957) classic work on administrative leadership that has been recognised as one of the earliest comprehensive works in later reviews (such as van Wart, 2003).

Reflecting the trend in mainstream leadership literature, leadership was still being treated as an executive phenomenon, even as late as the 1970s. It was only after Burns's (1978) book that the transformational theme was introduced into the leadership discourse. Consequently, this period saw the rise of two contesting camps, emphasising on the transactional actor or the manager and transformational actor or the leader. The latter is further diversified into three subcamps: the transformational school with its focus on organisational transformation, the charismatic school emphasising the leader–follower relationship, and finally, the entrepreneurial school focusing on laying down empirical processes and cultural changes catalysed by leaders to supplement productivity. The entrepreneurial school derived from both, focusing on change like the transformational school and on internal aspects like the charismatic school.

In the 1980s, the mainstream discourse on leadership moved towards standardised models that integrated both transactional and transformational constituents (for instance, see Bass, 1985, 1996; Bass & Avolio, 1990). However, scholarship within the public sector failed to reflect a similar shift. Resonating with the born versus made debate, public sector leadership studies developed around isolated nodes, such as training and development of leaders, leaders' role in innovation and creativity, followership, and leader action planning.

Greenleaf (1977) and Burns (1978) recognised heavy ethical undertones within mainstream leadership studies. Later reviewers, however, observed that this theme had been frequently revisited earlier within the public sector literature, especially in the area of ethical uses of discretion (van Wart, 2003). It was as early as the 1940s that Finer (1941) and Leys (1943, p. 10–43) laid the foundation to the administrative discretion debate. Academics enthusiastically discussed how much discretion public administration should have (see the works of Stone [1945] and Lawton

[1954] as cited in van Wart [2003]). The theme resurfaced during the 1990s, as the mainstream leadership discourse engaged vigorously in demystifying the close relationship that leadership shared with reform. This ultimately led to the emergence of the entrepreneurial (Bass, 1996) and the stewardship (Terry, 1995) camps. While both camps developed almost simultaneously, the latter gained popularity within the military leadership literature. In one of the earliest comprehensive reviews on public sector leadership, van Wart (2003) observes that although the volume of literature on the subject increased during the 1990s, the focus was rather dispersed. There was more attention given to studying policy leaders (both at local and national levels) and civic leaders, while elements of administrative leadership were largely left out of serious academic scholarship. He further adds that the shift to a more integrated approach during the late 1980s and 1990s lagged with respect to leadership studies in the public sector. He argues that the academic community's obsession over normative debates led to this dormancy.

Since the early 21st century, scholarship on leadership has gradually shifted from the transformational school and its variants to more coherent forms of valued leadership, such as distributed leadership (Spillane, 2005), collaborative leadership, network leadership, and ethical leadership. With respect to leadership in the public sector, academic discussion revolved around the traditional hierarchical models of leadership and the more recent public choice models. The discourse on leadership seemed to have arrived at a crossroads, one of them heading to a more conventional hierarchical leadership, with models emphasising technical prowess, scalar control, accountability, and amicable organisational setting. As a result of this, an efficient management driven by innovation (see Borins, 2000; Dawson, 2001), or by leveraging values and stewardship, became popular alternatives within the paradigm (see Terry, 1995). Conversely, the "public choice" (Booth-Butterfield, 1984, p. 883) models, or the "new public management" (Dunleavy & Hood, 1994, p. 9), or "reinventing government" (Osborne, 1993, p. 349–56) models have focused on market values, customer/client satisfaction, competitive accountability, employee empowerment, and flexibility in management (see Gore, 1993). Administrative leadership studies have had thorough discussions within this paradigm although the scope of the studies was rather limited (van Wart, 2013).

A third set of models that gained popularity within the public sector leadership discourse were the network-based models (Kettl, 2006). Borrowing heavily from network theory, this paradigm conceptualised leadership as a collaborative process with shared outcomes among different stakeholders, ensuring higher levels of inclusivity through democratic accountability (van Wart, 2013). This concept was popularly used as facilitative leadership in the political leadership discourse (see Greasley & Stoker, 2008; Vogelsang-Coombs, 2007) and as collaborative leadership within the organisational setting literature (see Crosby & Bryson, 2005). Collaborative leadership with heavier value components has been popularly identified in the public leadership literature as the value-based approach or the public values leadership (Getha-Taylor, 2009, p. 200–06) or new public service (Denhardt & Campbell, 2006, p. 565; Denhardt & Denhardt, 2003, p. 549–59). This approach

to understanding leadership in the public domain is highly critical of the market-based approach of viewing a leader's role. But even with the difference in outlook, the more recent paradigms were not without limitations. Before long, academic scholars pointed out that the models were unable to completely let go of the hierarchical elements of leadership (Gabris & Ihrke, 2007). In the case of network-based models, one cannot overlook the innate weaknesses of network theory (see Hill & Lynn, 2009; McGuire, 2006; Silvia & McGuire, 2010).

Although the normative debate within the public sector leadership domain has continued, it has become more sophisticated. The hierarchy or market-based debate has become less important, and data-based, empirical studies have gained more importance. Van Wart (2013) notes that with the rise in sophistication, the leadership models became increasingly complex and did not find popular reception outside the academic community. Globalisation has incentivised societies, markets, and states to go through a profound and transformative change (Benington, 2011), and the focus of the public sector leadership literature has started to look beyond formal authority, that is, actors holding formal positions within the government and public services. Elected or appointed politicians and public officials working for the government or in the public services have received most attention within existing academic literature (see Grint, 2010; van Wart, 2013).

The change in the governance context and with the introduction of concepts like polycentric governance (Ostrom, 2010, p. 641) and multilevel networked governance (Benington, 2000, p. 27), the public sector leadership literature is also evolving. This includes a growing consensus among academics that focusing only on state actors might not be sufficient to understand leadership in the public sector (Hartley, 2018). Of late, investigations into leadership's subscription to public interest has been in vogue. A growing section of leadership literature in the public domain now concentrates on the role of "leadership for the common good" (Crosby & Bryson, 2005, p. 156), the public realm (Kellerman & Webster, 2001, p. 485–514), the public sphere (Benington & Hartley, 2019), and "public value creation" in society (Getha-Taylor et al., 2011, p. 84; Crosby et al., 2015, p. 715).

Thus, academic discussion on public leadership points to a steady shift in perspective, from a narrow focus on public office holders to all who modify the public sphere. Hartley (2018) argues that the term 'public leadership' should be used as an umbrella term that includes politically led leadership, professional bureaucratic leadership, community leadership, and private sector leadership. A narrower term 'public sector leadership' should be used by studies focusing solely on public office holders. This thematic section has been placed within the public sector leadership discourse with the focal point being the theoretical exploration of bureaucratic and political leadership for disaster resilience.

Public Sector Leadership in Disasters

Used as an overarching terminology, 'crises' have often been used interchangeably with 'disasters', 'emergencies', and 'catastrophes'. It is in more recent academic

engagements that the need to differentiate between leadership requirements during routine emergencies and extreme events has been emphasised. Boin and Hart (2003) are one of the earliest scholars to have argued that the opportunities for initiating change during a crisis is lower than that which is usually anticipated. Therefore, the requirements for effective crisis leadership are very different from the requirements for effective reform leadership. But a large proportion of academic engagement on public sector leadership, in the context of disasters and extreme events, continues to concentrate on crisis leadership in the context of publicly visible failures (some notable works before 2010 are Barton, 2007; Boin et al., 2005; Coombs, 1999; Erickson, 2006; Ulmer et al., 2006). Although Boin and Hart (2003) have questioned the popular understanding of crisis leadership, they have not entirely disagreed with Quarantelli's (1998) findings that large-scale disasters might lead to improved disaster planning.

Building on this argument, Kapucu and van Wart (2006) further add that extreme events require a response that deviates from conventional emergency plans and protocols. Kapucu and van Wart (2008) have, thus, identified 12 key competencies of public sector leadership that are quintessential for responding to catastrophic disasters. Addressing the gap of more comprehensive frameworks to assess public leadership performance in the times of crisis or disasters, Boin et al. (2013) look into some of the critical tasks that crisis leaders perform and have suggested a comprehensive framework to understand leadership performance during a crisis. Focusing on political leadership at the strategic level, they have identified the following task: early recognition, sense making, taking critical decisions, orchestrating horizontal and vertical coordination, coupling and decoupling, meaning making, communication, rendering accountability, and learning and enhancing resilience. The task of meaning making has been further explored as the manner in which leaders have put forth their reaction in the media and before the public (Christensen et al., 2013). The exploration of leadership has been largely limited to the exploration of motives, tasks, competencies, and styles of individuals occupying formal positions.

Elaborating the earlier point, the term 'public leadership', within the disaster discourse, has been used to signify individuals holding senior positions within government and public organisations, either political appointees or career bureaucrats in the times of crisis. A concentration of academic enquiries on political (or elected) actors can be observed, with an emphasis on understanding their role in responding to disasters (Jong et al., 2016), leadership styles, issues of accountability and legitimacy failure (Boin et al., 2010), and blame management (Flores & Smith, 2013). Appointed actors remain relatively less explored in the context of disasters. The limited engagement remains within emergency management discourse.

Reflecting on the trend in mainstream leadership literature, studies on crisis leadership and emergency management showcase a similar shift from a hierarchical command and control leadership style that has been popular within emergency management leadership studies towards collaborative leadership (Waugh & Streib, 2006). Kapucu (2009) has added cross-sector governance competencies which

include collaborating and building relations, sharing visions with important stakeholders, distributed/shared leadership, and having sustainable community involvement. Taking the argument further, Boin and Renaud (2013) have noted that leadership at the strategic and operational levels of complex emergencies should be different. One of the reasons being, they argue, the difference between sense making at the strategic and operational levels of a disaster response. Thus, they have put forth the need for a meta leadership that can bridge the gap between strategic and operational leadership during disasters.

Public Sector Actors as Agents of Change

A recent addition to the contemporary literature on leadership, during emergencies and crisis, is the concept of change agents. In 2005, Sapient Corporation defined a change agent in the context of a crisis as follows:

> A forward-thinking and acting person who is able to deliberately and tangibly impact the mission and organizational direction or a bureaucracy from its status quo into an integrated, future state capable of contemplating and ultimately thwarting security threats, including natural hazards that might befall.
>
> *(Forrester, 2007, p. 10)*

Scholarship has agreed that transformational leadership, whether situational or functional, is essential for emergency management:

> [I]t deals with an expansion of the domain of effective freedom, the horizon of conscience, and managers' intentions to share mutually rewarding visions of success so as to empower employees to convert those visions into reality.
>
> *(Springer, 2009, p. 197)*

The unprecedented nature of extreme events has necessitated managers to take up innovative means to protect citizens. Thus, Springer (2009) recognises this new breed of emergency managers as change agents. Actors, occupying formal leadership positions, are doing things in radically new ways towards attaining a common vision. Unlike traditional public managers, they are adopting new ideas within existing bureaucratic hierarchies and motivating people within the organisation. (Drabek, 2014; Urby & McEntire, 2015).

In a more recent engagement with the concept, Drabek (2014) has emphasised the role of emergency managers as community change agents in addressing novel challenges for managing contemporary disasters, especially in the areas of public health and business continuity. Urby and McEntire (2015) have utilised public management concepts to understand the transformative role that can be played by emergency managers. Addressing the gap in disaster studies due to the lack of emphasis given to aspects of leadership and strategic management, there has been

an emergence—or what some might believe a resurgence—of concepts of transformational leadership in the disaster discourse.

Existing scholarship on bureaucrats emphasises their understanding of hazard situations and their agency in decision-making. It also highlights the close relationship that can be drawn between professional competence and a community's resilience to disasters within the political backdrop. It especially draws attention to two key findings: first, career bureaucrats working in areas like disaster management or disaster risk reduction are likely to choose between policy alternatives under the influence of their own professional alliances. Second, working through conventional bureaucratic channels, these actors presumably operate behind the scenes to maximise effectivity through gradual policy transformations rather than more obvious shifts in disaster-related policies (O'Donovan, 2018). However, taking the political context as a frame of reference, the interrelationship between professional competence of career bureaucrats and community vulnerability or disaster resilience to a large extent, as of now, still remains within uncharted territories (Morçöl, 2006).

In accordance with the findings of the literature review, we have adopted the public entrepreneurship frame for the current thematic section. It is because, firstly, we wanted to look for an alternative to the leadership traits and styles approach to understand individual actors who have played the role of agents of change; and secondly, it is due to the paucity of theoretical literature on agents of change in the context of the public sector, in general, and disasters, in particular. The primary purpose of the following section is to arrive at a conceptual framework of public entrepreneurship that can be applied to the study of public sector actors playing a key role in developing disaster resilience initiatives within a parliamentary regime.

Public Entrepreneurship

The term 'entrepreneurship' goes back to the 19th century, when its definition meant the diversion of resources from an area of stunted growth to that capable of generating higher yields (Jean-Baptiste Say cited in Dees, 1998, p. 2) and engagement in the process of value creation. Building on Say's basic concept, Austrian economist Joseph Schumpeter (1949/1975) explained, what he called, *unternehmer* or the entrepreneurial spirit. Hinged on Say's concept of value creation, Schumpeter recognised entrepreneurs as the primary drivers of economic advancement, by identifying opportunities and acting as catalysts for executing innovations to a point where the prior system becomes obsolete; an act of 'creative destruction' (Schumpeter, 1911). Thus, Schumpeter's entrepreneurs act as 'change agents' (Schumpeter, 1911) within a wide-reaching system. Peter Drucker (1995, p. 28) argued that an entrepreneur need not be a change agent but a good exploiter of change: "the entrepreneur always searches for change, responds to it, and exploits it as an opportunity." Consequently, scholars like Israel Kirzner (1979, cited in William J. Baumol, 2006, p. 2) have identified "alertness" as the most important quality in an entrepreneur. Martin and Osberg (2007) quite correctly note that

theorists universally have linked entrepreneurship with opportunities. Building on this understanding, entrepreneurship has been defined as a milieu within which a person (or actor) identifies and follows opportunities that crop up. They pursue these till the point that a visible outcome has been generated (Martin & Osberg, 2007, p. 31).

In response to existing conceptual inconsistencies with respect to entrepreneurs in the public sector, Robert and King's (1989, 1991) distinctions, based on one's ambit of involvement, come handy. Unlike other actors in the policy process, the public entrepreneur finds oneself involved in all three phases of the policy cycle: inception, design, and execution. Adopting a more restrictive view, Roberts and King (1991, p. 147) define 'public entrepreneurship' as "the process of introducing innovation—the generation, translation, and implementation of new ideas—into the public sector." Based on their behavioural characteristics, public entrepreneurs have been further separated into political entrepreneurs, executive entrepreneurs, bureaucratic entrepreneurs, and policy entrepreneurs (Roberts & King, 1991, p. 151). Political entrepreneurs hold elected positions as leaders within government while policy entrepreneurs introduce innovative ideas in public sector practice, by leveraging their positions beyond the formal government structure. Executive and bureaucratic entrepreneurs hold formally appointed positions in government. But while the former hold leadership positions in the government, the latter do not.

The contribution of public sector actors has been largely studied in the context of entrepreneurship. Public (political, bureaucratic, and policy) entrepreneurship has been an area of research in various disciplines, such as public administration and political science, since the 1960s. Although the role of crises and disasters in the emergence of entrepreneurship and innovation has been identified or studied in these disciplines, there is little to no research that focuses specifically on public entrepreneurship or innovation in the context of disasters. Therefore, we would like to foreground the need for further investigations into the different means of identifying windows (of opportunity), amassing resources, and setting up suitable governance structures (Williamson & Riordan, 1985, as cited in Klein et al., 2010) or institutions (North, 1990, cited in Klein et al., 2010) for pursuing public interest, especially in the context of disasters.

Much of hitherto research focus has been on public entrepreneurs in the context of the US, as the transient bureaucracy under the presidential system sets the competitive base for entrepreneurial activities. The dynamism within the presidential system is analogous to that of a market system. Owing to this, the politically unbiased essence of the behaviourist school has been especially lucrative to public administrators. In parliamentary regimes like India, the key features of entrepreneurship, such as competitiveness and dynamism that provide the parlance to a market system, are not at play. As a result, the framework of public entrepreneurship cannot be fully applied in its current form for the study of public actors within other governance regimes. The unique features of public entrepreneurship that differentiate them from a competitive market system, based on private or independent entrepreneurs (as represented in a tabular format in Table 4.1), would form the

TABLE 4.1 Unique Features of Public and Private or Independent Entrepreneurship

	Public Entrepreneurship	*Private or Independent Entrepreneurship*
Objectives	Greater diversity and multiplicity of objectives, more conflicts among objectives.	Precise goals and higher uniformity of objectives.
Authority	Authoritarian, more centralised or centrally controlled.	More democratic and decentralised.
Decision-Making	Less decision-making authority and flexibility, more operating constraints, subject to public scrutiny, expectations of transparency in decision-making.	More flexibility and autonomy in the decision-making process, more participative and independent in decision-making.
Rewards or Motivation	Less financial incentives, does not share enterprise profits.	Calculated risk-taker, invests own capital, prioritises financial incentives, and primarily are profit-seekers.
Innovation	Entrepreneurial in risk-taking with bias towards opportunistic actions, and work towards overcoming bureaucratic and political obstacles that their innovations may face.	Creating value through innovation and seizing that opportunity without regard to either human resources or capital, and procures, produces, and marshals existing resources for potential wealth creation.
Risk-Taking	Calculated risk-takers take relatively big organisational risks. Personal risks (to career and reputation) are minimal.	Risk-taking is a primary requirement in entrepreneurial character and functions. However, efforts are taken to minimise the usually large personal and fiscal risk.
Proactivity	Uses every opportunity to distinguish their public enterprise and leadership style from private peers. Understand the business, as well as supporting the opportunity for business growth and development.	Purses an opportunity, regardless of the resources they control, and relatively unconstrained by situational forces.
Funding and Profit	Not constrained by narrow profit, easier to obtain funding for risky projects and easier to raise capital, do not have a profit motive, instead they are guided by political and social objectives.	Can be bogged down by narrow profit, more difficult to access and obtain funding for risky projects, difficult to raise capital, profit-oriented.

Source: Kearney et al. (2009)

basis for the exploration of disaster resilience-building initiatives by public sector actors in the Indian context.

It will also contribute to exploring the unique role of public sector actors, as agents of change in public interest, within collective policy discourse. The concepts of public interest, utilisation of opportunity windows, need for decision-making during times of uncertainty, among others, set the base for drawing from the entrepreneurship literature for studying disaster resilience-building initiatives conceptualised and implemented by public sector actors. Drawing from the literature on public sector leadership, public sector innovation and entrepreneurship, and public network governance, the analysis has been structured around the exploration of the following themes: understanding the entrepreneurial context within the public sector and the origin of innovation, the motivation of public sector actors to introduce innovation in public sector practice, and the collective actions of public sector actors. Specifically, we shall explore (i) the networks and interface within social, economic, political actors and institutions, within the broader policy process; (ii) the challenges unique to agents of change in the public sector; and (iii) the strategies employed by the agents to successfully lead the change initiated by them.

The following section discusses in brief the basic conceptual underpinnings of the optimistic theories of disasters and makes an attempt to connect the actions of public sector actors to the Schumpeterian perspective of entrepreneurship. It is essential to clarify here that our reference to the notion of disasters as windows of opportunity is not an uncontested position. It is a subject of critical scholarship especially, the question of opportunity for whom. Scholarship has pointed out that disasters have often proved to be opportunities for the elite, who pursue their political ends at the cost of already marginalised groups. For instance, Wood and Wright (2016) have argued that disasters often create opportunities for increasing state-led repression and dissent, by reorganising the existing state structure and by introducing new actors and resources into the political environment. They further add that the question is not whether change happens but what factors cause these changes leading to repression within a state.

Disasters can lead to important changes that might be either positive or negative in nature. The characteristics and the manner in which the changes progress in the aftermath of a disaster help in understanding complex policy processes. While actors are just one part of the change process, disasters have the capacity to bring about changes within the broader context in which individuals operate. The term 'change' has been defined as "an alteration in the state or direction of social, economic, political, and environmental conditions that deviates from pre-disaster conditions, from an extrapolation of existing trends and which is substantial in terms of the impact on people's lives" (Birkmann et al., 2008, p. 638). He further adds that change can be either progressive or regressive to the society, and this interpretation depends on the observer of the change. In this study, we do not assume that all disaster-related changes are socially progressive, nor do we particularly estimate all public sector actors as benevolent. Disasters act as events that couple and decouple

significant streams within the public policy system, and it is the creation and recreation of unconventional circumstances and fresh interlinkages between actors and their contexts during these critical junctures that guides our inquiry. On similar lines of argument, we acknowledge the critical scholarship and define our position within the academic debate in the following section.

Disasters as Windows of Opportunity for Change

Disasters are 'windows of opportunity' (Kingdon, 1995) for significant changes in relations within and between socio-economic, organisational, political, and environmental domains (DHS, 2000; IRP, 2007; UNISDR, 2007; Wisner et al., 2004). Carr (1932) and Sorokin (1942), the exponents of optimistic theories of crises, have drawn parallels between extreme events and Weber's conceptualisation of charismatic leadership as a remedy for incremental rationalisation. In this thematic section, we specifically focus on disaster-related changes within the public sector, initiated by career bureaucrats or political actors, towards building disaster resilience within state initiative. The public sector actors are embedded in a network of social, political, and economic actors and institutions, within a particular context and time. Disasters facilitate the coupling of separate streams of problem-solutions with conducive contexts (including political force), which enable public actors to innovate and replicate innovations to achieve specific objectives in the public interest. The relevance of concepts such as windows of opportunity, policy window, uncertainty, and public interests in the context of disasters, connects actions of public actors to Schumpeter's (1911) perspective of one-of-a-kind entrepreneurship, which depends on utilising windows (of opportunity) to modify the modus operandi within public entities rather than as mere acts of response to institutional incentives. Though literature outside the purview of disasters, recognises the significance of disasters in opening up opportunities for change, innovation, and entrepreneurship, specific research focus on innovation and entrepreneurship in the context of disasters is missing.

We can observe a general agreement that disasters might be able to trigger positive changes for resilience building at different social levels (UN, 2005, cited in Birkmann et al., 2008, p. 7). However, there remains a void, especially with respect to conditions through which disasters create opportunities for change (Birkmann et al., 2008). Empirical studies, executed on the backdrop of presidential systems (especially, in the context of the US), have traced the trajectory of change advocated by influential policy actors post rapid-onset disasters (Birkman, 2001, cited in Birkmann et al., 2008). But forces within the parliamentarian regime are quite distinct, and the trajectories of change in these contexts need to be explored. We draw from Olson and Gawronski's (2003) work which conceptualises change as a crucial point for a fresh course of policy, action, or institutional system. The case studies in this thematic section focus on actions of actors and its interlinkages to individual motivation, actor network, context, political support, policy, and institutional regimes.

There are both formal and informal dimensions of change. In these case studies, we focus on formal responses or changes undertaken by actors within governmental organisations towards mainstreaming disaster risk reduction and resilience. The theoretical perspectives on change as discussed by Schneider et al. (2011) conceive it around the following dimensions: change as incremental versus sudden radical shifts in status quo, change caused by random forces versus change resulting from structured processes, and changes associated with exogenous events, like disasters, versus endogenous changes associated with the actions of actors within the system.

The analysis of disaster resilience-building initiatives provides an understanding of change beyond these dichotomies, and the case studies provides an understanding of the structured actions of actors within the system and its interface with the exogenous context of random forces and disasters. Therefore, the framework of analysis encompasses the exploration of other change-related themes including, the nature of change, different agents of change within the public-actor network, translation of change into practice, and the patterns of continuity and change (focusing on the patterns of innovation versus adoption of innovation).

Conclusions

The literature summarised in the sections earlier lays out the practical, theoretical, and historical context for the study of public sector leadership for disaster resilience. In the practical context of disasters, the role of public sector actors is significant. The exploration of public sector leadership has been largely limited to political (or elected) actors, with an emphasis on understanding leadership styles, issues of accountability, and legitimacy failure during crises. For bureaucrats (or appointed) actors, the literature has been relatively unexplored within the disaster management domain. The limited engagement is with appointed officials within the emergency management department and other emergency services departments within the government. Moreover, public sector leadership that shapes strategy on the one hand and operational nitty-gritty on the other, in the case of complex emergencies, are at different edges of the spectrum. Thus, the case studies chosen for this thematic section focus on both political actors and career bureaucrats at different levels of the government. As we have already discussed in the previous section, crisis management is different from traditional bureaucratic management, and most extreme events require a response that deviates from the conventional emergency plans and protocols. Most of the public sector actors have been engaged primarily in the post disaster context, and there is very little emphasis on their engagement in risk reduction or resilience initiatives. The case studies chosen for this thematic section focus on political and bureaucratic leadership towards building disaster resilience through state initiatives.

The exploration of theoretical literature on public sector leadership emphasises the need for cross-fertilisation between theories of public policy and concepts of public management. This overlap helps in understanding the role of public sector managers, bureaucrats, and agents in the policy process, especially

in the areas of networking, managerial quality, and performance evaluation. In keeping with this, the case studies are analysed to understand both the individual as well as the kind of relationships that one builds and maintains within one's networks. Focusing on the actor, the analysis of the cases has drawn from the public entrepreneurship literature. Since leadership is no longer limited to a singular entity but a complex interaction among actors, the focus of our analysis extends to understanding the emergence of transformational or change-based leadership within public sector networks. It will also contribute to exploring the unique role of public sector actors as agents of change in public interest within the collective policy discourse. The dynamism within the presidential system is analogous to that of a market system. In parliamentary regimes, like India, the key features of entrepreneurship—competitiveness and dynamism that provide parlance to a market system—are not at play. Thus, the framework of public entrepreneurship cannot be fully applied in its current form for the study of public actors within other governance regimes. Thus, the unique features of public entrepreneurship that differentiate them from the competitive market system, based on private or independent entrepreneurs, would form the base for the exploration of disaster resilience-building initiatives by public sector actors in the Indian context.

Drawing from the literature on public sector leadership (van Wart, 2003, 2013), public sector innovation (Borins, 1995, 2018) and entrepreneurship, and public network governance, the analysis has been structured around the exploration of the following themes: the understanding of entrepreneurial context within the public sector and the origin of innovation, the motivation of public sector actors to introduce innovation in public sector practice (Borins, 1995, 2018), and the collective actions of public sector actors. The analysis of case studies on disaster resilience-building initiatives provides an understanding of the structured actions of actors within the system and its interface with the exogenous context of random forces and disasters. Therefore, the framework of analysis encompasses the exploration of other change-related themes, including the nature of change, different agents of change within the public-actor network, translation of change into practice, and the patterns of continuity and change.

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5

BUREAUCRATIC AND POLITICAL LEADERSHIP FOR DISASTER RESILIENCE

Case Studies and Analysis

In the practical context of disasters, public sector actors have been engaged primarily in the post-disaster context, with little emphasis on their engagement in risk reduction or resilience initiatives. Here, we have chosen six case studies that focus on political and bureaucratic leadership towards building disaster resilience through state initiatives. To begin with, 76 initiatives, with demonstrably significant impacts in building and/or strengthening disaster resilience across the country, were chosen. The selection criteria covered (a) the public good dimension; (b) the operationalised integrated actions, with a focus on the practice of resilience; and (c) the goal of reducing disaster risk (including the risk of exposure, negative outcomes, not recovering, and not bouncing back better) and working towards building disaster resilience. Of these, only 19 initiatives were led by government departments or by individuals in power holding a formal position within the government. Of the 19, the final 6 case studies were shortlisted by identifying 'integrated or mainstreamed initiatives, led by public institutions that are comprehensive, unique, and sustainable and have demonstrated significant impact towards building and/or strengthening disaster resilience.' The excluded cases did not meet these criteria because either (i) they lacked project components and activities that were unique and/or (ii) they were not comprehensive enough or the project was still in the design phase. Of the six cases, Hiware Bazar was the only initiative led by a political actor. The other five cases are based on the geographical spread of the initiatives and the different levels of the government involved; for instance, state-level initiatives (Jalyukt Shivar, Dhara Vikas, and Matsya Mitra), district-level initiatives (Sabujayan), and initiatives led by line departments (rural development and fisheries). Malin, the sixth case study, is the only case where reconstruction at the grassroots has been managed by the district administration, rather than a central recovery authority.

Focusing on the individual and the kind of relationships maintained within one's networks, the cases have been analysed based on their entrepreneurial contexts

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within the public sector and the origin of innovation; the motivation of public sector actors to introduce innovation in public sector practice (Borins, 1995, 2018); the collective actions of public sector actors; the networks and interface within social, economic, political actors, and institutions within the broader policy process; challenges unique to agents of change in the public sector; and the strategies employed by the agents to successfully lead the change initiated. Interviews were conducted with key stakeholders, including, wherever possible, the actor(s) involved in initiating the project(s), others sharing close professional relationships with the actor(s), and the beneficiaries. The case analyses provide an understanding not only of the structured actions of the actors within the system but also of their interface with exogenous random forces and disasters. The framework of analysis encompasses the exploration of other change-related themes, including the nature of change, different agents of change within the public-actor network, translation of change into practice, and patterns of continuity and change. The primary data has been corroborated by secondary data available with the stakeholders and in the public domain. Narrated chronologically, each of the case summaries have been loosely structured around four subheadings (context, actors, constraints, and outcomes) to ease navigation through the sections. However, due to the overlapping nature of information, not all cases could be summarised under all four subheadings.

Enhancing Fish Production through Community Engagement in Jharkhand: Matsya Mitra (Friends of Fish)

Context

The state of Jharkhand was created on 15 November 2000. Along with a rapidly growing economy, the young state had to provide adequate food and nutritional security to its growing population. Despite a huge potential for fisheries and aquaculture, Jharkhand saw massive deficit in the supply of fish in 2000. The estimated fish production in the state was a meagre 14,000 tons, whereas the demand was over 700,000 tons. With this huge gap between the supply and the demand, it was clear that the new state needed a way to sustainably harness the potential of its fisheries to ensure adequate food supply to its populace.

The inability of the state to meet the demands of the people was also detrimental to the reputation of the newly elected government, and the administration found itself in midst of a unique opportunity to catalyse change. The Directorate of Fisheries took on the task of formulating a strategy to facilitate a horizontal expansion of fisheries as well as a vertical integration across the state. They launched the Matsya Mitra programme with the aim of achieving self-sufficiency in fish production while encompassing the entire value chain of pond management, harvesting, sorting, packaging, and improving the marketing infrastructure. Progressive local fisherfolk were roped in to provide a much-needed link between the department and the community, and were called Matsya Mitras. In 2010, crop production

dropped by half due to extreme temperature, decreasing rainfall and worsending soil health. This further increased the significance of Matsya Mitra in the state. This strategy proved to be effective, and Jharkhand was successful in doubling its fish to 106,430 tons between 2006–07 and 2014–15. By 2017–18 (till December 2017), fish production in the state reached 140,017 tons (Pandey, 2016).

Actors

During one of their field visits before 2007, officials from the Directorate of Fisheries noticed that not only was there no communication between the department and the fisherfolk but also the community was unaware about the existence of such a department. During this period, the production of fish seeds in the state was not much, and Jharkhand depended on supplies from the Naihati region of the neighbouring state of West Bengal. The seeds were of superior quality but expensive. Key officials from the Directorate of Fisheries including the Secretary and the Director recognised the importance of having field-level representation of the department. During that time, businesses of West Bengal used to place agents at the block level. The agents were promised a financial share, if they ensured that fish seeds from a particular brand were grown in all waterbodies within a village. A successful chain of middle-person was already functioning within each block, and the state decided to continue operating in a similar fashion, with the difference that the agents would be incentivised to work with the state instead. It was envisaged that each panchayat would have one Matsya Mitra, who would be associated with the area's water resources. The aim was to create a resource pool of trained community workers, who could eventually lead a participatory and collaborative process by supporting technology-led and profit-driven activities for the development of the sector. This programme was deemed as an essential addition that had the potential to transform the fishing sector of Jharkhand.

The difficult task of handpicking successful fisherfolk was based on strict selection criteria, including a candidate's awareness of resources, influence over local fisherfolk, willingness to work with the Directorate of Fisheries in facilitating the supply of seeds and inputs, and the ability to manage the logistics for promoting fishing with the department and other stakeholders. The allocation of the Matsya Mitra's area of operation depended on their influence and interest in the cluster.

The department started by introducing the concept of aquaculture and its financial benefits through training and motivational sessions. The then director of the Directorate of Fisheries, a native of the state of Jharkhand, had a good understanding of the local issues and encouraged the local communities to acquire additional income augmenting skills. With an educational background in ecology, his experience has been of key importance in leading the knowledge development process. Once the first batch started demonstrating the benefits of fish farming, the department followed it up with another round of training that provided details of the existing schemes of the department. The training is intended to ensure that the Matsya Mitra can disseminate information about the departmental schemes to potential beneficiaries at the panchayat level.

Constraints

The success of aquaculture depends on the availability of adequate water reservoirs. Jharkhand, unlike its neighbouring states Bihar and West Bengal, lacks sufficient available water resources. Most of them (almost 85%) are either owned privately or held under community ownership. It was the decision of involving local communities that ensured the successful implementation of aquaculture in the state. At present, most of the *dobhas* (small water reservoirs) owned by tribal villages are used for fish cultivation. The Directorate of Fisheries constructed thousands of small reservoirs before the monsoons for the production of fish seeds. The Matsya Mitras played a key role in aquaculture by consistently monitoring and evaluating critical vitals in and around the waterbodies, such as the content of organic carbon. Based on the data collected and whenever necessary, they provided instructions to local fish farmers for regulating the values. The department also allowed transformation of unused coalfields into large ponds for fish production. This network of rejuvenated tanks has the potential to mitigate the effects of floods and drought.

The funding for the initiative was ensured by converging existing government schemes, as also modifying the way different departments work for the implementation of projects. Collaborating with a training institute, the State Training and Research Centre in Ranchi helped in knowledge dissemination and training costs reduction. The fisherfolk required at least three rounds of training to understand the technicalities of the methods involved. Initially, there were agents for supplying seeds. But it was the department that assumed overall leadership in the implementation.

In 2007, the Chandil Dam Cooperative Society was formed to improve farmer income and to claim government benefits. The residents of the area comprised traditional farmers, with no prior knowledge of fishing. When the dam was under construction, they lost their means of livelihood and were perennially in search of odd jobs. After the formation of the cooperative, the residents started attending the training in fish production. Several of them were selected as Matsya Mitras, and they extended their support to panchayat members to mainstream the concept of aquaculture in the region. Consequently, the Directorate of Fisheries launched a pilot project in the Chandil dam area, whose success helped in convincing the heads of government departments and local communities alike. In time, the project was upscaled into a comprehensive statewide programme, incorporating lessons learned from the pilot.

The Matsya Mitra programme aims to improve livelihood opportunities for the rural population of Jharkhand, especially the marginalised groups of Scheduled Castes and Scheduled Tribes. During the initial stages of implementation, a gender-inclusive perspective was not considered. However, subsequently, the department decided to introduce the Riverine Fish Farming (RFF) as an alternative source of income for the newly formed women's groups. Besides providing services, the Matsya Mitras have also assumed leadership roles. As progressive fish farmers, empowered with good training and better exposure to good practices,

they could demonstrate improved performance. Although the Matsya Mitras provide free services as volunteers, the Directorate of Fisheries offers them incentives for performance.

Outcome

While the Matsya Mitra scheme was initially conceived to benefit individual fisher, its scope has more recently been expanded to the community level. Officials believe that the initiative will help in improving the health of community-owned waterbodies by reviving their lost sense of ownership. At the level of the community, the scheme beneficiaries are encouraged to form fisher collectives to receive technical guidance and logistical support from the state government. Thus, the department incentivised community participation through the provision of equipment and housing schemes, which facilitated the buy-in.

The Neel Kranti Mission (Blue Revolution, 2016) is a central government scheme that aims to achieve the economic prosperity of fish farmers and improve dietary sustenance by optimally wielding the capacity of waterbodies albeit in a sustainable manner (that is, by upholding ecological security and balance) (Department of Animal Husbandry, Dairying & Fisheries, 2016). The focus here is on substantially enhancing productivity by harnessing inland and marine reserves of fishes through fisheries and aquaculture, and promoting cage culture, RFF, or other fish production programmes. Jharkhand has leveraged the Blue Revolution initiative to boost its feed mills to avoid purchasing at high rates from others. Moreover, the department has appointed an agent for supplying seeds of the Indian Major Carp for fish production with a 10% subsidy. The decentralised effort in building capacity of the communities as well as that of local self-governance personnel to improve coordination between the communities and the fisheries department yielded visible benefits in Jharkhand.

Riverbank Stabilisation through Vetiver Plantation in West Bengal: Sabujayan (Greenification)

Context

With six major rivers flowing into it, Nadia is a predominantly agricultural district in West Bengal. Owing to a lack of natural drainage and the concentration of most of its rainfall in the monsoon months, the district is prone to frequent inundation. According to reports by the West Bengal Irrigation Department, 43% of the total geographic area falling within the state boundary is prone to floods, and an average of 800 hectares of land is annually engulfed by its rivers. Nadia was severely affected during the floods of 2000 and 2015. The overdependence of the government on traditional engineering practices has increasingly come under criticism due to its inconsistency with the three pillars of sustainability: economy, society, and environment. Several interventions were administered over the decades at high

environmental and financial costs albeit with limited success. As a result, a large proportion of its population from the severely affected blocks is displaced annually. With a limited state budget, finding a low-cost and environmentally sustainable solution had become imperative for the state.

Soft engineering techniques (like forecasts, flood warning systems, land-use management, wetland conservation, and river reclamation) have been increasingly adopted as low-cost alternatives to addressing disaster risks globally. Unlike hard engineering methods (like dams and levees), these techniques require lower maintenance, are environment friendly, and are in tune with the global sustainability agenda. The vetiver grass technology is a low-cost panacea to a host of environmental challenges. Scientifically known as *Chrysopogon zizanioides*, it is a densely cuffed perennial grass traditionally grown in India for its economic value. Studies have shown that vetiver's deep-root system helps in preventing soil erosion during heavy run-off. Additionally, this breed of grass has a high tolerance to extreme salinity, acidity, alkalinity, heavy metals, and agrochemicals. As a result, it is increasingly gaining popularity as a bioengineering tool.

Actors

In 2007, the then executive engineer of the Public Works Department (PWD) in Assam and the coordinator of the Eastern India Vetiver Network (branch of the Vetiver Network International founded by notable agriculturist Dick Grimshaw (Grimshaw & Helfer, 1995)) led the project on the application of vetiver plantations for riverbank protection and slope stabilisation along the Brahmaputra River. He leveraged his position within the global vetiver network to introduce this non-traditional technology in a novel context. Funded by the Government of Assam and the PWD, the pilot was successfully executed by the Rural Development Department. Although the project was primarily managed by the state, a popular plant enthusiast played an important role in supplying vetiver grass in Assam.

The success story in Assam encouraged the then additional district magistrate (ADM) of the Howrah district to introduce the new technology in West Bengal. Along with the executive engineer of the PWD of Assam, the ADM of West Bengal launched a pilot in the Khanakul block in Hooghly district, prone to severe bank erosion. The department took up the plantation in a 500-metre stretch. Utilising the existing Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005, the department worked on the pilot to demonstrate the effectiveness of the technique, with the intent of enlisting the activity with the scheme. This helped the department to tap more state funds and implement the idea on a larger scale. After a successful pilot, the Department of Panchayat and Rural Development, under the leadership of the then district panchayats and rural development officer (DP&RDO) of Nadia district, started the work on vetiver plantations. While the state government had accepted the effectiveness of such plantations for the protection of river embankments, the question that remained

was this: how would the district administration prove that the project would be a success in Nadia? Being aware of the fact that the plant grows rapidly, the DP&RDO decided to procure a small consignment of vetiver grass saplings from outside and grow the rest domestically. This reduced the expenditure on purchasing thousands of saplings, and the overall cost was brought down.

Constraints

The state government formally adopted the project in 2015 and named it Sabujayan or Greenification. Designed to mitigate the problem of riverbank erosion, the project was implemented in three phases: nursery raising, restoration-cum-plantation on the riverbanks, and handicraft production using the leaves of the vetiver plant. Sabujayan aimed to protect 743.97 kilometre of embankments under the MGNREGA scheme and provide livelihood opportunities for over 5,000 households through self-help groups (SHGs). About 1,200,000 vetiver saplings were purchased from a specialised agency, certified by the International Vetiver Organization, and the structures for the dedicated nurseries were provided by the government. Since it takes at least nine months for the root system to grow to a sufficient depth for the plantation to be successful, the administration selected the South Indian variety of vetiver saplings.

Workshops and trainings were provided at the district, block, and village panchayat levels. The district administration soon noticed that women were more skilled at nursery rearing and made them in charge of the nurseries. This also helped the administration fulfil their official mandate within the MGNREGA. Experts in vetiver technology learned about the project through social media platforms and readily supported the initiative, providing the administration with the much-needed technical knowledge in the early stages of the plantation.

The administration was aware of the need for regular supervision to protect the saplings. Therefore, it included a provision for the same under the Model Plan Estimate, which was circulated by the District MGNREGA Cell in Nadia. The department utilised the provisions of MGNREGA to provide wages for 100 workdays, required for nurturing and planting the vetiver saplings. While a major part of the fund came from the MGNREGA, the SHGs were initially supported by the state government. The presence of lipase in vetiver plants triggers faster growth when the grass blades are cut after the plant reaches a particular height. The top parts of the grass can be used for producing high-quality handicraft. Therefore, a third component named *Jeevika Saathi* (livelihood assistant) was added to the project to help support women.

Initially, the practice could not be replicated at a large scale, owing to a lack of expertise in nursery. In 2015, a popular plant enthusiast started working with the Group for Rural Alternative Movement (GRAM), a public holding solely dedicated to the welfare of the socially neglected and economically backward sections residing in rural areas. He was roped in to lead the movement, in collaboration

with the Vetiver International Network. With an expertise in vetiver, GRAM imparted training to the SHGs for nursery raising and arranged hand-holding sessions for master trainers at Assam and Tamil Nadu agricultural universities. This collaboration helped in giving momentum to the initiative.

Outcome

Although the project aimed to complete the vetiver plantation along 743 kilometres of the riverbank under the MGNREGA, only 200 kilometres could be completed within a period of two years in Nadia. Out of this, only about 150 kilometres of plantation was deemed 100% effective. In districts like Chagda and Ranaghat, where erosion is particularly severe because of the sinuous course of the river and velocity of the currents, the vetiver plantation has failed to protect the embankments. The administration believed that the problem could be circumvented if the villagers were convinced to give up suitable tracts of land for the plantation. Vetiver plantations should ideally be done 50 metres from the embankment, where the slope is relatively stable to allow the growth of the plants. This ensures the effectiveness of the plantation in restricting toe erosion. But the communities refused to part with their land for the plantation. This became one of the major hurdles. Having personal experiences with failed embankments, the then DP&RDO of Nadia, the project lead, came up with an alternative approach of building a concrete wall first, which would protect the young plants till they grow. However, the administration did not get funds for constructing the wall. There was money only for the plantations. In these regions, vetiver planting failed to protect the embankments.

Springshed Rejuvenation in Sikkim: Dhara Vikas (Springshed Development)

Context

Almost 80% of Sikkim's rural population is dependent on springs to meet their water requirements. Over the years, several factors have resulted in the depletion or dying of these springs, with climate change being one of the dominant ones. Climate change has affected the rainfall patterns in the state, which now tend towards greater intensity and reduced frequency of precipitation. Since 2006, the Rural Management and Development Department (RM&DD) has been implementing projects under MGNREGA in Sikkim, achieving considerable success and earning itself a reputation for its innovative models. During that time, the department was already implementing watershed development programmes under the MGNREGA. However, these measures were inadequate to address the issue of water scarcity. While watershed management activities focused on protecting the source of water, the underlying problem of drying up of water sources remained unaddressed.

The issue of water scarcity, due to the depletion of springs, was brought to the notice of the RM&DD by women farmers on World Water Day in 2008.

Dhara Vikas, or springshed development, was conceptualised to address the problems faced by people living in the water-scarce regions of Sikkim, mostly in the southern districts and some parts of the west. It included interventions that are archetypal to most watershed development projects, such as digging trenches; planting trees, fodder grasses, or hedges; and plugging gullies. It started as a pilot initiative in 2010 under the MGNREGA and was led by the then Special Secretary of RM&DD. It aimed not only to revive dying springs but also to increase their discharge levels. Besides its significant impact on the conservation of water, it also helped prevent forest fires by keeping the forests moist even during the lean season.

Actors

The lack of existing programmes for spring revival in India or abroad, from which the department could draw some reference, posed a huge challenge while designing the initiative. There was no similar programme that could directly be replicated or adapted for Sikkim. Thus, Dhara Vikas had to be conceived in the form of action research. Designing it from scratch required training of personnel, which resulted in bringing together different stakeholders with various types of specialisations, such as the World Wildlife Fund (WWF) and People's Science Institute (PSI). The conceptualisation of the programme was, thus, the result of the collective efforts of the WWF, PSI, and the RM&DD. The principles of hydrogeology, watershed, and geographic information system mapping were built into the design of initiative to assess the extent and location of the spring recharge areas, which are entirely dependent on local geology and rock structure. Prior to starting the action research, the department undertook capacity building initiatives for the government functionaries. The most vulnerable gram panchayats in the south and west of the Sikkimese territory were selected for the pilot study. Vulnerability assessment helped the department to assess where the interventions were most needed. Accordingly, the first pilot of Dhara Vikas was started in 2010 to revive Nagi Lake. The pilot showcased favourable outcomes. The lean period discharge increased substantially from 4.4 to 14.4 litres per minute.

During the first two years, the department worked in partnership with the WWF India and PSI Dehradun. Both the organisations supported the training to build capacities in their domains. Alongside training, the department prepared a baseline spring atlas and developed an inventory of spring sources for better understanding. Since the state is located on fragile terrain, it became imperative for the department to collaborate with different stakeholders for the development of specialised knowledge and skills in areas such as rainwater harvesting, hydrogeology, spring discharge measurements, use of global positioning systems, and laying of contour trenches (NITI Aayog, 2015). In 2010, the Advanced Centre for Water Resources Development and Management was brought in to help build the teams' technical knowledge.

In 2011–12, the department partnered with the German Technical Cooperation Council to develop a Dhara Vikas manual handbook and translated it into local languages in partnership with the United Nations Development Programme (UNDP). The handbook was shared with the gram panchayats. In 2013, the RM&DD conducted a natural isotope study with the help of the Bhabha Atomic Research Centre, Mumbai, to help understand natural aquifers better. A frontline public servant's networks at the Mountain Institute were crucial in building working relationships and deepening stakeholder engagements with many NGOs in Sikkim.

Besides using the handbook, the project leaders also made efforts to sensitise people and raise awareness about groundwater resources and the project. There were initial challenges because certain terms and concepts were too technical to be explained in common parlance, but it was vital to the contexts. Hence, one of the key responsibilities of the project leaders was to simplify certain concepts, using the local language and context. Such an approach helped people understand the project's importance and relate to it. This made acceptance simpler and faster.

Constraints

The pilot phase as well as the initial phase of the initiative helped the department in identifying the shortcomings and addressing them with appropriate action plans. Initially, the focus was on reviving individual springs by digging trenches at strategic locations. The first review of the programme in 2011–12 revealed that, despite encouraging results before the earthquake of 2011, some springs stopped yielding adequate flow after the earthquake. To counter this, the programme adopted a landscape-based approach. The focus shifted from reviving individual springs to recharging aquifers. This approach is more effective and sustainable and remains unaffected by earthquakes because the entire aquifer receives treatment. Initially, private land was also considered a recharge area, but on many occasions, the owners of private lands opposed the initiative. Therefore, the scope of the initiative was restricted to government land and reserve forests. The change in approach to a landscape-based one helped avoid problems arising from the issues of land ownership because most hilltops are owned by the government.

The importance of the location of the trenches was realised after the first review of the Dhara Vikas initiative in 2011–12. It was learned that the distance between the spring and recharge area does not affect discharge as much as the slope of the spring. Hence, focus shifted to identifying the slope of the spring rather than the distance. Likewise, it was understood that the minimum size of the recharge area, while accounting for land availability, must be at least 10 hectares for it to be effective and serve its purpose.

The collection of the baseline information on discharge was missed. In such cases, the only way of monitoring the impact of the project was community perception. Therefore, the need for conducting a baseline survey, which included baseline discharge data, was considered imperative for the project. Measuring

discharge at regular intervals was also considered essential, since it depends not only on the treatment of recharge areas but also on rainfall patterns. RM&DD faced considerable difficulties in monitoring the discharge because of lack of scientific monitoring systems and manpower. The department took the support of the UNDP in 2014 to build such a system to overcome the challenges. But the work is still in progress.

Outcome

There is a committed involvement from the villagers whose participation includes bringing problems to the notice of the department, identifying drying springs, and preparing water budgets. The entire community reaps the benefits if an issue gets addressed, for the suggested solutions usually have a strong technical backing. For instance, the location for trenches and recharge points are based on the principles of geohydrology, thus, averting potential problems that could arise from arbitrary decisions. All work-related concerns are taken up at the panchayat level, and any issues arising among the villagers are resolved through discussion. Thus, it did not require separate grievances redressal mechanisms. The role of community members on ground zero was to mainly dig the trenches as per the instructions of the field supervisor or project leader. They are paid as per MGNREGA norms. The programme also has provisions for maintaining the assets because of its linkage with MGNREGA. The current practice involves the community regularly keeping a record, especially during the lean season. Despite the challenges emanating from the complex scientific methods involved, the initiative was successfully expanded to other drought-prone regions of Sikkim in 2012. In 2012, Dhara Vikas was also included under the MGNREGA by the Planning Commission as one of the activities that could be carried out in the programme at the national level.

Making Maharashtra Drought-Free: Jalyukt Gaon Abhiyan and Jalyukt Shivar Abhiyan

Context

Maharashtra has a long history of watershed development and water conservation. The 1972 drought led to a paradigm shift in the thinking on water conservation, which, in turn, led to several watershed development programmes and schemes being initiated in the state. Several NGOs and individuals also played key roles in furthering the watershed development efforts of the state. Despite these efforts, drought continues to severely impact the communities. Grappling with the increasingly erratic nature of the annual monsoon, and unsustainable agricultural and water management practices, the state experiences water scarcity nearly every year.

In 2012–13, the state witnessed particularly severe droughts, and the state government was under tremendous pressure to deal with it effectively. In 2012, the

government was compelled to present a white paper in the legislative assembly about the development of irrigation in Maharashtra. According to the Economic Survey of Maharashtra 2012–13 (Directorate of Economics and Statistics, 2013), scanty rainfall had reduced water availability in some parts of the state to alarmingly low levels, especially in the districts of Aurangabad, Jalna, Beed, Osmanabad, Nanded, Ahmednagar, Nashik, Jalgaon, Pune, Satara, Sangli, Solapur, and Buldhana. These districts had been facing severe water scarcity, and the consecutive drought years caused the groundwater table to recede 2 to 5 metres below the normal. As a consequence, 910 tankers were deployed to supply drinking water to a population of 1,801,491 from 3,903 habitations in 700 villages. Following this, in March 2014, a special investigation team headed by Dr. Madhav Chitale, was formed to study the irrigation capacity of the state. Since 2014 was an election year, the state government could not afford inaction towards a persistent crisis.

In the meantime, two drought mitigation initiatives were being undertaken by the state. Efforts were made to increase the depth and width of a stream in Shirpur, Dhule district. Later, this method came to be known as the Shirpur pattern. The other initiative was Jalyukt Gaon Abhiyan (JYG). This initiative was undertaken in the Pune administrative division under the leadership of the then divisional commissioner. Subsequently, the state government decided to replicate the JYG by integrating certain elements from the Shirpur pattern in other parts of the state, under the name of Jalyukt Shivar Yojana (JSY).

Actors

With no water for drinking and fodder for livestock, Maharashtra was on the brink of facing a full-blown agitation by victims of the water scarcity. The priority of the state administration was to avert unrest that could lead to potential violence, and the solution was to involve communities towards the efforts to mitigate drought. The then divisional commissioner of Pune was a native of the drought-prone village of Lodhawade and, thus, no stranger to the adversities of drought. Watershed development had been successfully undertaken in Lodhawade, and he began devising a way to assemble key government departments to work in coordination, towards drought mitigation. Thus, the JYG was conceptualised.

The approach adopted was to treat each village as a single unit and ensure its self-sufficiency in water. In 2012, an action plan was drawn, based on a common understanding that the community will implement the schemes for water conservation, with government funds. All related decisions had to be taken by officials in consultation with the community. The objective was to ensure that water is made available according to local needs and the water budget. The JYG was implemented in 2012–13. All water conservation activities were undertaken through the convergence of various funds and existing government schemes. This significantly increased the water storage capacity in the Pune region.

Constraints

After the elections in 2014, a Bharatiya Janata Party–Shiv Sena coalition government came into power, and the divisional commissioner was promoted to the position of secretary of the Water Conservation Department. The newly elected chief minister expressed his appreciation for the success of the JYG in Pune. The promoted secretary seized this opportunity to replicate the model in other parts of Maharashtra. He pitched the model to key stakeholders, including all the departmental heads, during five workshops conducted across the state. Finally, a joint decision was undertaken to adopt good practices from all successful water conservation projects in the state. Consequently, the JYG model was updated, and a draft plan was prepared for its implementation across Maharashtra in 2014. Bringing all stakeholders together on a single platform ensured a convergence of purpose for all departments in the government. The new draft had to be approved by the newly elected minister for water conservation in the state. The secretary made a presentation to the minister of water conservation and the chief minister in 2014. It was followed by a state-level workshop where the tentative draft was introduced in the presence of well-known social activists Anna Hazare and Popatrao Pawar, divisional commissioners, collectors, and Zilla Parishad CEOs. Everybody agreed that no other previously implemented initiative had been as integrated as this one. Hence, a consensus was reached to take the initiative across Maharashtra as JSY. In this manner, the two major challenges in implementing JSY in the state—inculcating a positive attitude among communities and getting all departments of the government to work together with a sense of urgency—were addressed tactfully. The government buy-in was ensured through a series of workshops organised for department officials, and collaboration with local NGOs was sought to mobilise local communities.

Outcome

The initiative was not without challenges. The JSY adopted certain features from the Shirpur pattern, which itself had several underlying shortcomings. The Maharashtra government constituted a committee to study the Shirpur model. The committee's report, submitted in 2011, observed that necessary technical norms were not followed. Consequently, the government appointed another committee that submitted its report in April 2013 with certain recommendations. These were incorporated in the draft plan for JSY on 9 May 2013. The draft specified that only second- and third-order streams should be taken up for widening and deepening. However, the original draft plan for the JSY of 2014 included the construction of chain cement concrete canals and deepening/straightening/widening of dams/canals. This kept the door open for stream/nala deepening, widening, and straightening. The word 'river' does not find a mention in the draft. Despite this, work was done to increase the depths of rivers. Other equally important activities, such as repairs, desiltation, cleaning of tanks, and compartment bunding, were

largely overlooked because they generated less visibility. Not much attention was given to the adverse impacts of river and stream deepening on the hydrology of the region, such as exposure of aquifer and subsequent evaporation of water, and/or the contact of aquifer with mud and potential choking. With disproportionate emphasis placed on the widening and deepening of rivers, the JSY eventually turned into a contractor-driven scheme. Most of the work was done using heavy equipment which deprived communities of employment opportunities through the MGNREGA. With a focus on immediate and visible results, the complex task of making Maharashtra drought-free was oversimplified. The relatively easier task of voluntary labour and development of watershed structures were accomplished because of the attractive prize money offered. However, this cast a question mark on the sustainability of the scheme. Who was responsible for maintaining the structures? The government expected the communities to undertake the responsibility of long-term maintenance. Yet without any support, the community was unlikely to act and at a later stage, a similar programme might have to come up for the maintenance of these structures. Instead of paying attention to the demand side management techniques, such as regulation on extraction, usage, and cropping patterns, the supply side needs were being addressed by initiating schemes such as the JSY.

District-Level Leadership for Reconstruction and Rehabilitation Post Landslide: Malin Village, Pune District

Context

Although the Western Ghats are located in a relatively stable seismic zone, steep slopes, the overburdened landscape, and high-intensity rainfall make landslides a major concern in the region (National Disaster Management Authority, 2009). The village of Malin is situated in Ambegaon block of the Pune district in Maharashtra. In 2013, a high-level working group chaired by K. Kasturirangan submitted a report to the Indian government that included a list of ecologically sensitive areas in the Western Ghats. Malin was on the list. Its remote and hilly terrain has a fragile and stressed ecosystem due to the presence of a large dam in the vicinity.

Continuous and heavy rainfall in the area since 25 June 2014 triggered a devastating landslide in Malin in the morning of 30 July. An eight-day search and rescue operation concluded on 6 August. The landslide killed 151 people, buried 45 houses, affected 40 families, destroyed 120 metres of the roadway, and affected almost 44,245 square metres of land area. Most of the 275 survivors suddenly found themselves homeless. The Disaster Management Act (2005) mandates each district to form a District Disaster Management Authority (DDMA), with the district collector at the helm of affairs. Since landslides are local disasters, the DDMA is mandated to coordinate the main role in prevention, response, and recovery. The rehabilitation work at Malin led by the district administration of Pune was submitted as one of the entries for the Excellence in Governance Award presented by the

Indian Express Group. But despite the localised nature and effects of the landslide, it took three years to rehabilitate the survivors of Malin.

The administration constructed temporary shelters for accommodating evacuated families. Each shelter was 12 by 14 feet, or 170 square feet (sq. ft.) in area and had a height of between 8 and 9 feet, keeping in mind the living space required for a family of four. Constructed from tin sheets, these shelters had poor insulation and lacked adequate openings for cross ventilation. The rehabilitation was expected to be completed within six months, and the shelters were built with this timeframe in mind. However, the families lived in the shelters for about two and a half years from November 2014 to March 2017.

Between September 2014 and April 2015, a search was conducted to identify suitable sites for rehabilitation. Having lived in the village for several generations, a section of the survivors wished to be rehabilitated close to their farms along with the provision for a school, water supply, a hospital, telecom connectivity, and so on. The survivors who had migrated to the nearby cities of Pune and Mumbai demanded to be rehabilitated near an urban centre. Although Malin had a nearly homogeneous population concerning caste, there were distinctions based on economic status. This led to a clash in the rehabilitation needs of the two sections of beneficiaries. Accordingly, the district authorities identified two locations, Zanjarewadi and Adivare. Zanjarewadi, one of the hamlets of Malin, is less prone to landslides, according to the assessment of the Geological Survey of India, which was appointed the nodal agency for identifying landslide risks. In contrast, Adivare is located on the main road and has good road and transport connectivity. Zanjarewadi was taken up for the rehabilitation process, keeping in mind the demands of the local people.

Meanwhile, the district collector and other officials maintained constant communication with the beneficiaries. In one of their meetings, the beneficiaries expressed their concern over Zanjarewadi owing to its distance from their farms and informed the administration that they would rather be resettled at the site of the temporary shelters. The administration now faced a fresh challenge. The land that was demanded by the beneficiaries belonged to the school and was insufficient to resettle all survivors. Land from the nearby Adivare village, which included farmland belonging to a few farmers, was considered. Even then, the land available was less than the eight acres required. The farmers objected and refused to part with their land as their livelihood depended on it, and there was a general sense of animosity towards the survivors, who they felt got more compensation than they deserved. Finally, in January 2015, a patch of land in Amade village was identified as a possible site for resettling the survivors of Malin.

Actors

In the absence of other alternatives, a site in Amade was selected. But there were growing apprehensions among survivors regarding the recurrence of a landslide.

Therefore, the administration decided to build a village that could resist future earthquakes. A retention wall was constructed for ensuring stability, and the housing units were constructed using aluminum framework technology. This earthquake-resistant technology was developed in the 1970s by W. J. Malone, a Canadian engineer, for constructing low-cost housing units in developing countries. It uses concrete as the primary construction material which ensures low cost and easy availability. The basic framework for each housing unit is made from high-strength aluminum alloy panels without any plaster or brickwork. These are leakage proof and earthquake resistant and, consequently, satisfied two key necessities for successful rehabilitation in Amade.

Under the budget head of Relief on Account of Natural Calamities, the Maharashtra government provided Rs. 200,000 for the construction of a house measuring 269 sq. ft. per family. While these houses had basic amenities, the expectations of the beneficiaries were still unmet. They wanted a house of an area of at least 400 sq. ft. The district administration agreed to construct houses with an area of 425 sq. ft. each. The increase in area led to a per housing unit cost escalation to 723,000. This resulted in a funding gap of Rs. 523,000 per house and a total deficit of Rs. 4 crores.

The beneficiaries had formed the Malin Rehabilitation Housing Construction Co-operative Society (Ltd) in 2015 to oversee the reconstruction and rehabilitation processes. During one of their meetings with district officials, the Empathy Foundation was recommended for funding the deficit. The Empathy Foundation is a registered charitable trust working for the upliftment of marginalised sections in rural Maharashtra. It had, in the past, contributed to the construction of a school in old Malin and had an established relationship with its population. The Foundation agreed to help. A Pune-based construction firm Shubham Civil Projects Pvt. Ltd. possessed the required expertise and expressed readiness to take up the work.

According to the government regulations, a tender must be floated before awarding contracts. This process usually takes eight weeks. However, the procedure was bypassed in this case because of the urgency. A tripartite agreement was signed between the Malin Rehabilitation Housing Construction Co-operative Society (Ltd), the construction firm, and the Empathy Foundation for the reconstruction of Malin. The Foundation emphasised that there should be some monetary contribution from the survivors to ensure their commitment. Each beneficiary contributed a pre-decided amount in the account of the cooperative society. Automobile majors, like Volkswagen and Mercedes-Benz, also collaborated through their corporate social responsibility funds. The Empathy Foundation and officials from the PWD jointly monitored the progress. The funding was met through collaborative efforts of the government, peoples' cooperatives, private players, and an NGO. The Malin landslide was widely reported in the media, and the district administration leveraged the media attention to gather support for the initiative from key stakeholders.

Outcome

The Malin landslide triggered a paradigm shift in disaster management practice in the district. Disaster Risk Assessment and Reduction initiatives were undertaken in other landslide-prone villages in the ecologically sensitive zones of different blocks in Pune district. On the request of the district administration, three different agencies, namely the Geological Survey of India, the Groundwater Survey and Development Authority (GSDA), and the College of Engineering, Pune, undertook a survey of the surrounding areas of Malin to assess the risk of landslides. This resulted in a response-centric approach to disasters being complemented with mitigation and a preparedness-centric approach in the district.

Ideal Village amid Drought: Hiware Bazar

Context

Maharashtra has experienced recurrent droughts and that of 1972 proved to be a catalyst for the inception of watershed development initiatives. Ahmednagar, the largest district in the state, has been struggling to contain the risk of droughts. Some of its well-known initiatives include the ones started by Fr. Herman Bacher (1968) and those in Ralegan Siddhi (1975) and Hiware Bazar (1990). The village of Hiware Bazar, led by its council head, Annarao Patil (name changed), has been able to change the course of development in the village and is hailed as a success story.

Located in the Nagar taluka of Ahmednagar district, it has always faced the brunt of uneven and erratic rainfall. Patil recalls that in his childhood, the village was prosperous. The first drought occurred in 1972, the second in 1978, and a third in 1982. And like many other villages in the district, from the 1970s to the early 1990s, Hiware Bazar struggled with water scarcity, low agricultural productivity, acute poverty, rising alcoholism, and migration. After getting elected as the *sarpanch* (village head), Patil initiated the work of reviving Hiware Bazar. On 26 January 1990, the gram sabha identified eight basic needs of the village: (i) well-irrigated cropping fields, (ii) adequate fodder, (iii) affordable health services, (iv) safe drinking water, (v) better roads, (vi) local employment generation, (vii) access to education, and (viii) electricity for operating farm pumps. The journey started with the renovation of the village temple and additional classrooms in the primary school. After further deliberation with the villagers about their most persistent need, watershed development was determined as the next priority.

The blueprint was derived from Ralegan Siddhi, a village situated in the Parner taluka of the same district. This village faced poverty, migration, and rising alcoholism. A resident of the village, who would go on to become a well-known activist in the country, Kisan Baburao Hazare, popularly known as Anna Hazare had coordinated a successful participatory watershed development campaign in the village in 1975. The transformation of Ralegaon Siddhi was achieved through a strong

value system characterised by four *bandis* (prohibitions): *nashabandi* (ban on addiction), *nasbandi* (sterilisation), *kurhadbandi* (ban on cutting trees), and *charaibandi* (ban on grazing), apart from the principle of *shramdaan* (donation of labour) (Mehta & Satpathy, 2008).

In 1992, the Maharashtra government initiated the Adarsh Gram Yojana (AGY), which means the ideal village scheme. It was based on the idea of replicating the Ralegaon Siddhi model in each of the 300 talukas of the state (at that point of time). The AGY endeavoured to provide safe drinking water, employment, green fodder, education, and health to help the village in achieving self-sufficiency. It was adopted by the government at a time when, both at the global as well as national levels, watershed development was beginning to emphasise the revival of concepts like indigenous knowledge and the re-emergence of the idea of the community-centric development and natural resource management.

Actors

In 1993, the Social Forestry Department approached Hiware Bazar to implement the joint forest management programme and help regenerate 70 hectares of degraded forestland as also the catchment area of wells. Through contributory labour, the gram panchayat successfully built 40,000 contour trenches around the hills to conserve rainwater and recharge groundwater. Consequently, the residents took up massive plantation and forest regeneration activities. It then applied to the AGY and passed resolutions to comply with the five principles guiding that scheme. For the implementation of watershed development work, an NGO, the Yashwant Agricultural, Rural and Watershed Development Agency, was set up by Patil soon after. The implementation of the scheme began in 1994, and the major part of the work was completed by 1998.

The village was divided into three micro-watersheds, and the watershed development measures included continuous contour trenching (CCT), nala bunding, contour bunding, and construction of percolation tanks and *bandharas* (low dams constructed to control the flow of water) for the storage of water. Plantation continued on the forest, private, and panchayat land. This work led to an increase in the water level of the village and its green cover. Socio-economic conditions improved. The increased water level meant that more land was now brought under irrigation. In the context of such a change, two additional principles were adopted. There were restrictions placed on the cultivation of water-intensive crops and the digging and use of borewells.

In 2002, the gram sabha started the practice of annual water budgeting. The village panchayat collaborated with the GSDA for initiating the process, and from then on, the village panchayat collectively decides on the water usage with priority to human and animal consumption. Since April 2010, the management of drinking water supply in Hiware Bazar has been led by the Sujal Mahila Swayam Sahayata Gat, a women's SHG. It is responsible for the purification of drinking water, maintenance, and monitoring of water quality, and collection of water tax

(Kumar, 2015). Each household is charged a fixed amount of money every month as water tax.

Grounded in the local context, three government programmes, the joint forest management programme, the Employment Guarantee Scheme, and the AGY, helped in contextualising the initiative. But the key driving force was the need-based planning done through the gram sabha, wherein the village community was consulted regarding the problems being faced. Thus, the projection of needs ensured that the villagers were convinced that the work was being undertaken for their future benefit. To mobilise the village community, Patil elucidated various verses of different saints that would help people to relate to the environment. The non-controversial agendas of renovation of the village temple and school helped in bringing the community together. This ensured the availability of a key resource, namely, labour.

Constraints

Although voluntary labour played an important role in addressing funding gaps during the implementation process, ensuring a proper flow of funding still proved a challenge. This was solved through the convergence of government schemes. Patil faced external pressures like non-cooperation from some factions in the village and other political groups in the region. To overcome this, he ensured impartial treatment and non-alignment with any of the cliques that existed in the village. During the implementation, one of the main challenges was to maintain the enthusiasm of the village community. Keeping alive the notion of building an ideal village helped in maintaining community cohesion. The gram panchayat's decision to levy certain taxes helped to instil a sense of ownership. To ensure sustainability of the initiative, the leadership was gradually decentralised further, and new institutions were formed to take up important responsibilities. The village of Hiware Bazar has now become an inspirational model for others.

Outcome

Since 2009, Patil has been the chairperson of the AGY to help replicate the success of Hiware Bazar in other regions of Maharashtra. He added two more prohibitions in the existing *panchsutri* or five principles. These include a ban on borewells and the improvement of sanitation. Presently, he has transformed his role to that of a mentor to different organisations, the government, and those who wish to undertake work in water conservation. Hiware Bazar's success indicates a gradual repositioning of the basis of political leadership at the local level, from what Sangameswaran (2008, p. 384–408) terms as "moral authority or patron—client relationship" to that of "brokerage." In this novel case, the village head (sarpanch) played the part of a facilitator; all the while strategically playing upon his strengths which came from the acceptance due to his native status and the exoticised semi-outsider status to ensure an impact (Sangameswaran, 2008; Singh, 2013).

Discussion

Context

Borins (2002) has identified three categories of public management innovations: crisis response helmed by politicians, organisational reformation contrived by newly appointed agency heads, and decentralised innovation triggered by frontline and mid-level public managers. Across the cases studied, crises and disasters have provided windows for change. Politicians innovated their response to suit a crisis or publicly visible failure (Hiware Bazar). It has been observed that agency heads are likely to innovate when they find themselves heading a visibly decaying public sector agency (Matsya Mitra, Sabujayan), while frontline and mid-level managers displayed great agility in responding to internal setbacks and opportunities, created by the advent of fresh technology (Malin, Jalyukt Shivar, and Dhara Vikas), and in a few case studies, we observe a combination of the two (Sabujayan and Malin).

Crises or disasters offer opportunities to entrepreneurs in bringing about policy changes, thereby affecting in many cases, a paradigm shift in approach. However, our observations show that innovations precede the framing of a disaster narrative. For example, in the initiatives studied here (in situations of drought, flood, and water scarcity), the actors relied on existing solutions; thus, confirming diffusion of an innovation. One case where the actors brought in innovations that were unique in the region is that of Dhara Vikas. The question that logically follows is, under what circumstances are opportunities for change generated within the public sector of the country? Some clues for this can be found in the cases studied.

The adverse effects of climate change propelled Jharkhand towards a full-blown food crisis. The newly elected government took structural measures to strengthen irrigation infrastructure (Chandil Dam). But this led to large-scale inundation, and several communities lost their livelihood. The Directorate of Fisheries then decided to utilise the political and problem windows to increase its organisational efficiency and firmly establish its position in the new state through the introduction of the Matsya Mitra programme. Similarly, watershed development initiatives failed to address drought and extreme temperature in Maharashtra. Consecutive and severe droughts in 2012 and 2013 showed up the inadequacies in the government's response. Since 2014 was an election year, the government could not afford inaction, and the administration wanted to avert the outbreak of violence across the state. The solution included involving people in the process of drought mitigation, and hence, the Jalyukt Shivar initiative came into being in Maharashtra.

In a similar vein, severe floods in 2000 and 2015 drew negative media attention to the failure of government response in Nadia district. The government's overdependence on traditional engineering practices could no longer justify the costs to the exchequer. Sabujayan provided a new alternative to leadership through bioengineering technology. In the case of Dhara Vikas, we see that modifications within watershed development techniques were no longer a possibility since it failed to provide a long-term solution for the water scarcity issues of Sikkim. In Malin, the

agent of change used the landslide to introduce disaster-resilient infrastructure in rebuilding the village in an ecologically sensitive landscape. Ignoring the proximity of the resettlement site to Dimbhe Dam reservoir (considered to be one of the root causes of earthquakes in the region) and the March 2010 recommendations by the Western Ghats Ecology Expert Panel, chaired by Madhav Gadgil (Gadgil, 2011), on the prohibition of new dams, no significant step was undertaken to address the perceived risk. Instead, the need for diverting attention from the failure of leadership within the government provided the agent(s) with both the problem and the political window to mainstream one's idea.

This finding corroborates with Meijerink and Huitema's (2010) thesis that the agents of change exploit a problem window as an opportunity to bring forth a change, but they rarely utilise it to ask questions about the failure of the public sector to address disaster risks. The agents in this study have often manipulated and exploited these problem windows by covering up the effects of long-term public leadership failures within the disaster management sector. One possible explanation for this could be the dependence of the agents on the same institution to mainstream their ideas, and hence, putting forth the institutional limitation of the public sector would add to the constraints to innovation. This is in contrast to one of the basic principles of transition management (Loorbach, 2004; Rotmans et al., 2007), which emphasises addressing complex issues of meta-governance by bringing together different actors and activities into exclusive governance spaces that allows them to change existing dominant regimes of governance.

Actors

The objectives of utilising an agency perspective to analyse the six cases were to find out who exactly is/are behind the observed change and focus on the motives, roles, and strategies of these individual(s). Here, individual public sector actors (within government bureaucracies and an elected politician) behaved as successful agents of change and played important roles in actualising transitions. Analysis of the case studies showed that these individuals, however, have a range of objectives not limited to just public good. This finding corroborates with Bakir and Jarvis (2017), Bakir (2003), and Schneider et al. (2011), who have differentiated public interest from private objectives. Their findings state that the type of gains that public entrepreneurs seek through their innovations include 'the desire for power, prestige and popularity, the desire to influence policy, and other factors in addition to any money income derived from their political activities'. They further argue that private interests are met through the utilisation of public resources that are meant for public interest, defying the core objective of public entrepreneurship.

In the cases of Hiware Bazar, Jalyukt Gaon Abhiyan, and Dhara Vikas, leveraging public interest in mitigating the risk of drought, the actors were presented with a unique opportunity to significantly boost their career trajectory both within the public sector and outside it. For example, a frontline public servant, Kamble (name changed), at the time of designing the Dhara Vikas initiative in Sikkim, was able

to secure a position within the prestigious Forest Management Institute of India. While Annarao Patil, who led Hiware Bazar to the status of an ideal village in Maharashtra, was presented with the opportunity to exert more power and control over resources and, perhaps, exert more autonomy. The main objective of the case studies, in which the transitions were initiated in a government department, like Sabujayan and Matsya Mitra, was to streamline the preferred and proposed idea into the state policy realm by utilising state funds.

In accordance with the findings of Schneider et al. (2011), both private and public entrepreneurs perform the key functions of identifying unfulfilled needs within a system and find a suitable solution to satisfy the needs. The observations in our cases support Roberts and King's (1991) findings that policy entrepreneurs 'trade-in ideas', whether it is the invention of entirely new concepts and policy ideas or the brokering of ideas from other policy domains. The primary function of public entrepreneurs is the creation of a link between the identified problem and the solution proposed or preferred by them. This practice of problem framing emerges from and is influenced by the policy objectives of their peers or the groups they associate themselves with and are dependent on. Thus, these individuals find disasters to be opportunities to stress the merits of the alternative that they propose. For instance, in the case of Sabujayan, an expert bureaucrat identified the persistent risk of riverbank erosion and specific needs of communities subjected to the risk (in this case, migration and loss of livelihood). In such a situation, the framing of a powerful disaster narrative came from the repeated failure of hard engineering structures to mitigate the risk of flooding in the district (repeated floods, with the most devastating one in 2015). Thus, a radical switch to a low-cost, ecologically sustainable alternative provided by bioengineering technology was the need of the hour.

The framing of the disaster narrative is designed in a manner that it overlaps with the objectives of the proposed solution. Although the narratives could have been framed to push for long-term changes within the existing policy, the change agents chose short-term, high-impact options in order to seize existing opportunities, thus, highlighting the issue of the lack in the notion of power in transition management that has been put forth by critics (Berkhout et al., 2004). Transitions are implicitly about power struggles between two regimes, resulting in a shift of power which is lacking in all the case studies (except for Dhara Vikas and Hiware Bazar). Across the case studies, the availability of state funds (like using MGNREGA funds for implementing activities and addressing disaster risk in the cases of Sabujayan and Dhara Vikas) emerged as one of the major opportunities sought by public sector actors to realise the intended transitions. In line with the findings of Schneider et al. (2011), another major push for a new idea emerged from public demand. In the case studies of Dhara Vikas and Hiware Bazar, it was the community that voiced their need for a change in the existing state of affairs. This offered a unique opportunity for Kamble and Patil to gather support from their peers, political leadership, and senior bureaucrats to back up their ideas. In the absence of such an opportunity for the identification of a gap, individuals have undertaken surveys

(Matsya Mitra) and commissioned a literature review (Dhara Vikas) to generate ripples of concern within the system.

Strategies

The new concepts and policy ideas introduced are non-traditional and resource-driven, thus, carrying the possibilities of failure. Across the six case studies, the inability to ensure buy-in from peers and beneficiaries has been identified as a major risk. For instance, deciding to introduce new technology-driven fishing techniques to a predominantly traditional fishing community (Matsya Mitra), planting vetiver grass in community-owned lands (Sabujayan), and prioritising the principles of disaster risk reduction in post-landslide reconstruction and rehabilitation process at Malin carried innate risks of aggressive rejections from the community. The agents have used different strategies to reduce the risk by garnering support for their proposed solution.

These individuals developed strategies to convince others that their solution was better than other (more traditional) alternatives available at that time and that the existing approach to disaster management in the country had to be replaced by a more holistic approach. This need would not be fulfilled by minor modifications to the existing disaster policy. For instance, the failure of a government scheme of constructing farm ponds in Ralegaon Siddhi (Hiware Bazar), the failure of hard engineering and modifications made to it over the years to arrest riverbank failure (Sabujayan), the incapability of the state government to increase fish production despite the availability of adequate waterbodies in the state, the success of modern technology in neighbouring states with similar physiography (Matsya Mitra), and the temporality of business-as-usual reconstruction process in a landslide-prone area (Malin) put forth a strong statement that all options currently available in the country were incapable of addressing the increasing complexity of disasters and extreme events in the 21st century. Thus, the current system has to be redesigned completely in order to meet the current and future needs for disaster planning in the country.

To convince their peers, the leadership embedded within the bureaucratic system, and lawmakers that the benefit is higher than the costs of undertaking the risk, these individuals relied on their networks with experts or with strategic institutions (like technological and scientific institutions, specialised training and educational institutes, NGOs, and private-sector organisations) to plan and implement their ideas. In the case of Dhara Vikas, Kamble's long-term association with the World Wild Life Fund and acquaintance with expert NGOs working in Sikkim helped him to appeal to his peers and seniors in the government that he was in a position to design a one-of-a-kind project. Similarly, the DP&RDO of Nadia district leveraged his network within the scientific community to leverage his suggestion for natively grown vetiver slips. Thus, the public sector entrepreneurs believed and made others believe that their alternative was the most viable one without burdening state expenditure. Across all six case studies, organising exposure meetings,

training programmes, motivational speeches, press conferences; publishing booklets with graphical representation of the key concepts; piloting; and networking have been used as strategies for diffusing their idea among the community, media, and donor organisations. Actors have also utilised strategic information, knowledge of bureaucratic procedures, technical expertise, incentives, rhetoric, and piloting as important strategies for garnering support.

Networks and Coalitions

Public entrepreneurs in the study have relied on their networks and alliances to put their ideas into practice. Transition management is believed to create "exclusive governance spaces" or coalitions that enable innovation to occur at different levels of the system (Loorbach, 2004; Rotmans et al., 2007). The three types of coalitions described by Meijerink and Huitema (2010) are 'advocacy coalitions,' 'strategic alliances,' and 'coalitions based on resources.' 'Advocacy coalition' is defined as an alliance based on the similarity of values, ideas, and beliefs. They might share a disciplinary background (the knowledge of bioengineering, in Sabujayan) or not adhere to any specific disciplinary background (sustainability and mainstreaming the idea of vetiver in the country). In the case of Sabujayan, all actors had an interest in vetiver grass albeit for different reasons. The government wanted to mitigate riverbank erosion, the experts wanted to advance their research by getting an opportunity to implement the pilot, the organisation GRAM aimed to improve the socio-economic status of the rural population, the vetiver network wanted to introduce vetiver technology to a big country, while the plant enthusiast was interested in conservation of plants. Strategic coalition is an alliance of dissimilarity but grounded in a strong cognition of a shared interest in bringing about a specific change in policy. The Jalyukt Shivar Yojana in Maharashtra could be taken as an illustration of this. Different government departments and individuals came together leveraging a common interest in bringing about a change in the drought policy of the state. The final kind of alliance is one where there is neither shared belief nor common interest. The alliance survives simply because the members have to depend on one another to ensure that they reach their own distinctive goals. This type of coalition entails negotiation and compromise. A change agent is aware of the sources from which they can procure resources. The Matsya Mitra programme depended upon the Directorate of Fisheries and the community, whereas the Malin reconstruction depended on the district administration, and the NGOs and private players relied on their funds and expertise.

In the case of public sector entrepreneurship, a balance between advocating new ideas and brokering cooperation with other stakeholders needs to be achieved. In collective entrepreneurship, different stakeholders rely on different arsenal of strengths so that they can bring about policy change through collective effort. In this case, the change agents acted as moderators to build new relationships outside the traditional realms of a specific department or, in certain cases, outside

the government and in boundary organisations, with the community to broker collective policy change. Although, across the cases, the coalition restricted itself either to different departments within the government or a coalition of experts, and the community too was included in the process, their involvement was restricted to just attaining a buy-in for the proposed ideas, to have less friction during the implementation process. Perhaps, no effort was made to successfully utilise the intrinsic strengths of the community, or the community did not allow such space to the agents.

One arena in which entrepreneurs seek to innovate is the reshuffling of human capital in order to boost worker productivity (Schneider et al., 2011). This is where the availability of labour through MGNREGA made (and will continue to make) a significant difference in the context of disaster resilience-building initiatives. The ability of the manager to create the most apt organisational structure directly translates into a higher level of productivity. In a public sector organisation, this might reflect as an increment in fiscal savings (in comparison to peers), higher recognition, and higher levels of flexibility in budgetary allocations to pursue projects or perks. This might be explained by the argument against transition management put forth by Berkhout et al. (2004). They have pointed out that the 'guiding vision' (Loorbach, 2004) serves the purpose of mobilising resources from a selective group of stakeholders who forebear the transition process. While the other not-so-relevant stakeholders (especially the community and the marginalised groups) do not have the space for putting forth any alternative vision. Hence, the process of building a consensus over a guiding vision is contradictory and problematic.

While coalitions and alliances could provide some explanation for the five cases mentioned, the case of Hiware Bazar stood out as an exception. In this case, the appropriators of common property resources have adopted incremental changes in operational rules. Using the rational choice theories (Herrnstein, 1990, p. 356) that took shape within the neo-institutionalist paradigm, the beneficiaries consciously chose to abide by the rules to avoid harm. But at the same time, they adhered to the need for consistent action, expected low information and related costs, and were guided by the need to build norms grounded in reciprocation of trust. As a result, a small but steady group was devised. Such a change in natural resource conservation was facilitated by the leader of the local government. Lying at the boundary of structured and unstructured institutions, the role of leadership in channelising collective action in Hiware Bazar makes it unique from the other cases. Facing a new set of responsibilities, Patil was able to develop the right set of initiatives to align individual self-interest and collective benefit to ensure community participation in governing the commons. In the cases studied, most of the interventions are land-based activities, and therefore, non-availability of community land has been one of the major constraints (in Dhara Vikas and Sabujayan). In Hiware Bazaar, the only case initiated by a political actor, a holistic transformation in the village was brought about by touting strict adherence to a set of principles by the community. The initial set of transitions

brought in incremental change, which amounted to significant transformation in the community.

Constraints

On analysing the case studies, it was observed that individual entrepreneurs have performed similar functions and shared common strategies across the different initiatives. But the differences between the cases with respect to their potential to achieve a change and sustain it corroborates with Meijerink and Huitema's (2010) findings that the institutional context plays a very important role in policy transitions. According to the public sector entrepreneurs in the six case studies, they face two worlds while leading a transition: the internal world and the external world. The internal world comprises the demands of managing the local bureaucracy. For instance, in spite of powerful framing, utilisation of problem windows, and strategies for garnering support, converting the idea into practice was a challenge.

Across the case studies of Matsya Mitra, Sabujayan, and Dhara Vikas, actors faced the issue of non-availability of trained staff for implementation, monitoring, and evaluation. Since all the three initiatives were departures from the traditional approach towards a technology-oriented one, they had faced what Klein et al. (2010, p. 1–15) cite as institutional inertia, which could be associated with distorted perceptions (that may stem from myopia, hubris, denial, and/or groupthink), dulled motivation, failed creative responses, action disconnects, and political deadlock. The lack of robust and appropriate systems, and the upgradation of technology, pose challenges to the sustainability of the initiative. As Klein et al. (2010) have observed, vague measure for outcome and a general scarcity of competitive selection conditions render these techniques a bit on the trickier side.

Few individuals have developed strategies to overcome constraints from the internal world. The actors are seen to have created an enabling environment, such as by providing technical training to staff and cooperating with training institutes to help build the capacities of officials (Matsya Mitra, Sabujayan, and Dhara Vikas). As proposed by Miller (1991) and Wilson and Jillson (1989), when the entrepreneurial managers cannot offer financial pay-offs for their subordinates, their interpersonal skills and rhetorical abilities play an essential role in motivating them. In the case studies, the public entrepreneurs did so to gain support from the various departments (Matsya Mitra, Dhara Vikas, Jalyukt Shivar), which helped bring issues facing the community to the forefront.

A complex outside world has been defined as the "political, legal, and economic milieu in which constituency exists" (Schneider et al., 2011, p. 149). External issues are the opportunities and obstructions placed by the changing nature of their day-to-day environment, and the necessity to "interact with local politicians, interest groups, actors in higher levels of government, and the media to create coalitions supporting new policies" (Schneider et al., 2011, p. 149). The decision taken by the district administration not to conform with laid out government protocols put the administration under immense pressure from opposition political groups and media

(as in the case of Malin). As Borins (2002) explains, public choice theory states that the monopolistic nature of public sector agencies and the lack of a specific mandate often pushes innovation to a position of lesser importance. Additionally, the pressure felt from the actions of the opposition, media hunting for failures, and centripetal force exerted by central agencies restricts the free flow of innovation. He calls this phenomenon "management in a fishbowl" (Borins, 2022, p. 467). Thus, public actors make use of public resources, which often run out before a roadmap is made, to ensure the sustainability of the initiative.

Across the case studies, it was observed that dealing with the external world takes a backseat. An explanation for this could be the tendency of transition management concepts to undermine the complexity and volatility of complex social systems due to its overdependence on the idea of stewardship (Berkhout et al., 2004). Consequently, the sustainability of the initiative, one of the main principles that grounds transition management, has not been fulfilled even when the actors have seized the opportunities arising from disasters and crises. In the cases studied, the strategies to obtain community support, if there were any, were unsuccessful. As a result, in the case studies of Sabujayan and Dhara Vikas, the actor had to rely on public land. Overdependence on public resources puts the actors under normative constraints. The elevated sense of being under scrutiny and the high liabilities of failure (sabotage of professional advancements and marring of one's public image) obstruct individual entrepreneurial actions. Bakir and Jarvis (2017) state that policy entrepreneurs are not just "selling ideas to policy makers" (p. 466) but also translating it into practice. This is only possible when they are enabled by "structural, institutional and agency level complementarities that prevail over contradictory incentives" (p. 465).

Outcome

Across the six cases studied, we found ample evidence to arrive at the conclusion that public sector actors play an important role in realising transitions in disaster resilience policy. Reflecting on the nature of observed change across the cases reveals the distinctness of the adoption of new policies and its implementation. Across the cases, we observe a considerable change in the content (or structure) of the disaster resilience policy of the administrative unit (whether state/district/village) or in the overall governance paradigm around disaster resilience. As explained by Meijerink and Huitema (2010), substantive transitions focus on changes within the structures of the system, usually by introducing a new course of action to address a persistent (or long-standing) issue; for instance, the process of shifting from an activity-oriented to an integrated approach for managing disasters. While governance transitions are characterised by changes in the regulatory aspects of disaster management. In accordance with their findings, analysis of the six case studies has shown that in spite of the adoption of such radically new initiatives, an entire replacement of prevailing initiatives or a complete implementation of the new initiative remains elusive.

Substantive transitions observed in the cases studied are characterised by the adoption and implementation of new components to make a programme more holistic and comprehensive. The Sabujayan, Dhara Vikas, and Malin programmes have introduced structural changes in disaster policy through the adoption of new techniques or technology. For instance, the introduction and implementation of a bioengineering technique. But the continuing dependence on the construction of hard engineering structures, such as river embankments, along volatile stretches of riverbanks shows that a complete replacement of the existing practice of disaster resilience was not possible. Similarly, in Dhara Vikas, adopting a completely fresh approach of reviving natural springs, and in the Malin reconstruction, the choice of adopting earthquake resistant housing technology, all demonstrate how the new disaster resilience initiatives have attempted to add new components to make an existing policy more holistic. Although in certain cases, the actors have attempted to integrate two paradigms. For instance, in Sabujayan, an attempt was made to strike a balance between hard and soft engineering measures through the construction of a temporary river embankment for protecting young vetiver plantations.

The other cases studied have drawn upon existing programmes or schemes, in which the actors modified the way different stakeholders were working for the implementation of projects. Governance transition through the Matsya Mitra initiative in Jharkhand showcases decentralisation by cultivating leadership at the community level and the introduction of participatory governance through the establishment of fisherfolk's collectives. Similarly, in Jalyukt Shivar, multiple existing schemes converged into a single drought mitigation programme to unite key government departments through a sense of shared responsibility; while in Hiware Bazar, the decentralisation of principles for social change was introduced, and a participatory watershed development approach was adopted to regulate the use of water. Like in the cases of substantive transition, the cases of governance transitions (Matsya Mitra, Jalyukt Shivar, and Hiware Bazar) have also faced stress between the newly adopted and existing initiatives. For instance, in the case of Hiware Bazaar, community participation played an important role in addressing the funding gaps during the implementation process, but the bulk of the funding still came from government schemes. Thus, the state's control remained constant. While in the case of Jalyukt Shivar, the demand for water resources continued to be unregulated and co-existed with a more regulated supply side in the state. In Matsya Mitra, the Directorate of Fisheries retained the role of middle-person. Therefore, it is not always the intention of radical transitions in disaster resilience to completely do away with existing local institutions, and many a times, rules are overlaid while retaining the existing structure (Goldin & Kibassa, 2009; Lebel et al., 2009; Meijerink & Huitema, 2010). Therefore, incremental transition, focusing on the participation of other stakeholders (especially communities) in governance transition, becomes predominant.

In contrast to the mainstream policy entrepreneurship literature, Meijerink and Huitema (2010) found that in certain cases, transitions might not reach the stage where the old policies are entirely replaced by the new. Instead, it might be

even desirable to retain old customs and concepts. Across the six cases studied, the responses to the changing needs and demands of a region in the context of building disaster resilience consist predominantly of the convergence of existing policies. Although, in rare instances, there is convergence of existing policies with new concepts. Like in the Jalyukt Shivar, novelty was brought in with the adoption of scientific monitoring and evaluation. Similarly, the inclusion of bioengineering and springshed management within permissible activities listed under MGNREGA, and the two new principles being inducted into the Adarsh Gram Yojana, all point to integration towards more sustainable practices of disaster resilience in the country.

Conclusions

Dominant patterns of transition management emerged across the six cases in this thematic section, with the focus being on sociotechnical transitions. Elements of integrated leadership are largely absent in the disaster resilience practice within India's public sector, and the main spotlight continues to be on narrower transitions brought about by technological innovations without overall transformation of the social sector. Actor(s) at the forefront of transitions mobilise resources and converge expertise (through networks) at a solely technocratic level to manage disaster resilience initiatives within India's public sector. The community is left with a de jure role in the process and acts as a resource. Unlike the adaptive and transformational governance perspective which emphasises the involvement of the community and their gradual induction into the process, the traditional managerial perspective affixes accountability on individual actors for managing a transition, remaining ignorant of the power struggles behind any real change.

We need transformative resilience projects to address issues of social justice and exclusion. Collective entrepreneurship might provide us with a probable solution in the context of disaster resilience building within parliamentary forms of government. It is not the individuals but the institutions within which they operate that needs renovation in its approach to address more complex issues like disaster resilience, climate change, and sustainable development. But unlike predictions made by Rotmans et al. (2007) more than a decade back, transition management has remained in isolation and wary of new governance forms, focusing on pluralistic networks of government, market, civil society actors, and the community. Disaster resilience leadership cannot be limited to formal positions of power, but it should come from within the government, at the boundary, and outside government organisations, and from the grassroots, to find solutions to complex socioecological problems.

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6

CIVIL SOCIETY LEADERSHIP FOR DISASTER RESILIENCE

Theoretical Discussion

Responsibility for oneself, or the collective, exemplified in terms such as 'self-reliance', 'self-sufficiency', 'self-management', 'self-organisation', and 'self-determination' (Baker, 2002) is often used in relation to both resilience and civil society (Davoudi et al., 2018). The increasing use of these buzzwords reflects the shift in responsibility from that of the state to the individual, in the context of ever-increasing risk and uncertainty (Joseph, 2013; RRAC, 2009; Swanstrom, 2008; Walker & Cooper, 2011). This shift in responsibility is often equated to the transformation of individuals into responsible citizens or an effective civil society that springs into action, especially at the time of a disaster, for working towards a society that is fairer, freer, and more just (Taylor, 2002). Leadership is also often understood to be crucial in these transformations (100 Resilient Cities, 2016; Olsson et al., 2006). However, the thrusting of responsibilities in this form on individuals and communities, in the context of risk and uncertainty, is also a dominant critical discourse around disaster resilience (Davoudi et al., 2018; Fainstein, 2018; Peck & Tickell, 2002; Welsh, 2014). It becomes imperative, therefore, to review the synergies and points of contention between the concepts of disaster resilience, civil society, and leadership in the exploration of disaster resilience leadership in the Indian context.

The current chapter traces the practical, theoretical, and historical context of civil society leadership and its potential in facilitating disaster resilience in India. Like disaster resilience and leadership, civil society too, is a muddled concept with a wide variety of meanings and interpretations in different situations. In this chapter, we attempt to delineate the conceptualisation of civil society that fits the focus of the current study and to frame the research question that we address through the case studies presented and analysed in the following chapter.

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Civil Society and Disasters

This section sets the ground for the exploration of civil society leadership, by bringing together the limited literature that exists in the context of disasters.

Concept of Civil Society

The definition of 'civil society' is often characterised by other concepts, such as public good, common good, collective action, freedom, free association, rights, duties and responsibilities, deliberative procedures, fairer, freer and just world, modern lifeworld/Western modernity, human virtues, capacities, and modes of conduct, among others (Chatterjee, 2001; Reger & Staggenborg, 2006). However, the meaning and interpretation of the concept and its subdimensions vary widely in different contexts. For example, 'the realm of freedom' can be interpreted as freedom from the state or the realm of unfreedom and inequality in civil society, depending on the specific sociopolitical context, ranging from pluralism to totalitarianism (Baker, 2002).

The concept of civil society inherits a wide range of meanings and interpretations in different sociopolitical backgrounds. As a result, it also manifests differently in the arena of practice (Khilnani, 2001; Kaviraj, 2001). The spectrum of civil society practices, thus, comprises individual acts of assertion or dissent within a totalitarian regime with limited space for collective action, the free pursuit of commercial interest(s), the rediscovery of republican virtues or public spirit, the pursuit of rights, a self-rule more complete than what states can allow for, a fusion of civil with political society, the restrain and moderate state power, the limiting or dispensing off of expanding bureaucracy and state, and the instituting of the "institutional framework of a modern lifeworld stabilized by fundamental rights" (Cohen & Arato, 1992, p. 491), among others (Baker, 2002; Chatterjee, 2001; Kaviraj, 2001; Khilnani, 2001). As a result of the wide range of civil society conceptualisation and practices in different contexts, the existing body of knowledge remains fragmented and shallow for want of conceptual clarity and focus (Khilnani, 2001). Therefore, delineating practical, theoretical, and historical context in the use of the concept is recognised to be of utmost significance in the pursuit of any knowledge around civil society and not limited only to the study of civil society leadership for disaster resilience.

Though the definitions' emphasis ranges from subjective attributes of virtue and conduct (Khilnani, 2001) to that of the "formal institutional framework of a modern lifeworld stabilized by fundamental rights" (Cohen & Arato, 1992, p. 492), the mainstream literature on civil society uses it interchangeably with NGOs and social movements of all shapes and sizes. It is generally understood to be a space for joint action around shared interests, purposes, and values that are distinct from governments and for-profit organizations (WHO, 2007). It is referred to as "the sphere of ideas, values, institutions, organizations, networks and individuals located between the family, the state and the market" (Anheier et al., 2001, p. 21), propelled by the

key motivating force of creating a world that is fairer, freer, and more just (Taylor, 2002). Thus, civil society organisations have been conceptualised to include a "a wide of array of organisations, including community groups, NGOs, labour unions, indigenous people's organisations, charities, research centres, faith-based organisations, social movements, professional associations, and foundations" (World Bank, 2012, p. 1) and civic associations. The broad category of 'social movements', often interchangeably used with civil society, further represents a range of collective actions, including local grassrroots movements (Karki, 2002; Sengupta, 1982) to that of global civil society movements (Taylor, 2002). To be able to choose an appropriate conception of civil society for this study, we specifically focus on the contribution of civil society in the practical context of disasters, in the section that follows.

Practical Context

The literature on disasters explores civil society in relation to the concepts such as social capital, social network (Aldrich, 2012), a network of trust, reciprocity (Aldrich & Crook, 2008), collective or community action, civic engagement, downward accountability, and bottom-up approaches, among others. Thus, in the context of disasters, the concept of civil society is largely discussed in relation to the capacity and characteristics of the affected communities that facilitate effective community response. Often, community characteristics or capacities that enable collective action (Bera, 2019; Olson, 1965, Meinzen-Dick et al., 2018; Miller, 2013), such as connectedness (Olson, 1965), higher levels of communication (Kage, 2010), and providing of feedback (Briones et al., 2019), among others, are correlated to the strength of civil society and positive outcomes in addressing disasters. More recent disaster literature discusses the significance of civil society in relation to the failed strategies of upward accountability and top-down implementation (Briones et al., 2019; Shaw & Izumi, 2014; Vaughan & Hillier, 2019).

The literature on disasters associates a vibrant civil society with community initiatives for effective disasters risk reduction (Bera, 2019; Meinzen-Dick et al., 2018; Shaw & Izumi, 2014; van Wessel et al., 2019), better immediate response (Briones et al., 2019; Rumbach et al., 2016; Jalali, 2002), and quicker recovery (Aldrich, 2012; Aldrich & Crook, 2008). Situating the importance of civil society in the context of disasters, Aldrich (2019, p. 308) states, "Democratic countries envision civil society as a desired and active participant in the disaster response stage, helping to organize volunteers into organizations such as voluntary organizations active in disasters (VOADs), community organizations active in disasters (COADs), and other trained community-based aid givers." Often, communities are the first and only actors who respond and who have access to the last mile (Vaughan & Hillier, 2019).

The advent of decentralisation of disaster management responsibilities has further transformed the interaction between the state and civil society organisations (CSOs). The latter have played an important role in increasing civic engagement, policy development, and administrative implementation (Twigg, 2004). The coordinated

efforts of the state and CSOs have helped in responding to disasters more effectively in the recent past. During the Asian tsunami, civil society engagement helped in influencing the state policy to address the needs of the marginalised communities. They were also involved in the evaluation of the rehabilitation processes, thus, bringing the government's attention to the negative impacts of the state policies (Srinivasan & Nagaraj, 2007). Similarly, an effective and good coordination between the various departments and actors from CSOs, including NGOs, volunteers, and religious organisations, made the relief work during the Kerala floods of 2018 more feasible (Thomas et al., 2019). Often, the magnitude and frequency of disasters overwhelm government capabilities (Osa, 2013). This makes the role of such actors even more crucial. The donor government(s) and the international agencies, which regularly respond to disasters, need operational implementing partners. This, in turn, means that CSOs need to have unique capacities and functions - something, which the governments and the agencies lack. Hence, civil society is perceived to be an integral entity in the provision of services during all the phases of the disaster, in coordination with the state and other actors.

In the context of disasters, CSOs work at the community level; mobilise volunteers and funds in ways that other actors (for eg. the state) cannot; help connect various actors; set up or strengthen community-based disaster risk reduction (CBDRR) committees; provide specialised services that communities need in order to rebuild after a disaster; and help build a shared understanding of climate and disaster risks through 'participatory approaches' (Osa, 2013; Vaughan & Hillier, 2019). In delivering the earlier functions, civil society assumes various roles, including that of watchdog, advocate, service provider, experts, capacity builders, representatives, citizen champions, solidarity supporters, and definers of standards (WEF, 2013).

Apart from delivering services that other actors fail to provide, civil society is also seen as taking on the role of representing individuals and communities at risk. These forms of representations, as van Wessel et al. (2019) note, range from being observers, grassroots technical or knowledge brokers/partners, facilitators, sensitisers, and advisors. Observers represent socially excluded groups to facilitate their access to resources, through long-term grassroots presence and association. The technical brokers leverage their expertise (architectural, engineering, livelihood, etc.) to address grassroots issues that often involve accessing state schemes on livelihood and housing. The knowledge brokers value various knowledge systems and work with dominant and oppressed groups to overcome power relations that contribute to information asymmetry among the marginalised sections. The facilitators believe in the self-representation of vulnerable groups. They often work through community representatives to build linkages between communities, different CSOs, and other key stakeholders to enhance access to social safety schemes. The sensitisers empower the socially excluded groups by addressing persistent discriminations, such as that of caste and gender. They help these communities to be aware of their rights and entitlements. The advisors bring to light the plight of marginalised groups and value the interpretation of various policies to change practices in the context of disasters (van Wessel et al., 2019). Thus, civil society plays a critical

role in society, and it is called upon to serve the dual purpose of representing the masses and scrutinising the government's action—'extraction and legislation' (Özerdem & Jacoby, 2006).

Critique and Gaps

Although the disaster literature recognises the significance of civil society and explores its functions and roles in the context of disasters, there are several key concerns with respect to its conceptualisation. Though the significance of civil society is recognised through all the phases of disaster management (Bera, 2019; Meinzen-Dick et al., 2018; Shaw & Izumi, 2014), most studies on civil society focus on the post-disaster context of immediate relief, response, and recovery. Even though civil society has the capacity to shape the activities of policymakers and businesses, in the context of disasters, the role of civil society is limited primarily to post-disaster activities. For instance, the substantive independent organisational activities after the Mexican earthquake in 1985 (Quarantelli, 1993); the quick and successful response by community organisations in post-earthquake Peru in 1990 (Schilderman, 1993); the influx of voluntary action, in a community that had no such tradition, after the Kobe, Japan, earthquake in 1995 (Comfort, 1996); and the widespread relief efforts by civil society after the Gujarat (India) earthquake in 2001. The role of civil society in recovery, too, has been extensive and widely acknowledged, ranging from the South Asian tsunami of 2004 to the Kerala floods in 2018. They were the first responders and aided the process of recovery and rehabilitation. However, there is limited civil society literature that explores its contribution in the pre-disaster risk reduction (Shaw & Izumi, 2014; Meinzen-Dick et al., 2018; Bera, 2019) and disaster resilience-building initiatives (Grove, 2013; Forrest et al., 2019). This could be attributed to the ease of entry to the affected regions through the relief and rescue operations and the absence of a formal mechanism to ensure the participation of civil society in risk reduction activities (Shaw & Izumi, 2014). Although civil society is very active in the rescue and relief phase, very few stay beyond that except for some local and indigenous ones that continue with the engagement in pre-disaster mitigation, risk reduction, and resilience building (Shaw & Izumi, 2014).

The limited literature in the context of disaster resilience recognises both the possibilities and limitations of civil society engagement for facilitating disaster resilience. The literature that captures the specific contributions of civil society to the policy framework for building disaster resilience in Jamaica (Grove, 2013) and building hazard-specific flood resilience in the United Kingdom (Forrest et al., 2019) elucidates the possibilities. The literature also identifies the following roles and functions of civil society towards building disaster resilience: sensitising communities about the magnitude of risk; disseminating information and knowledge; managing expectations of the impoverished with respect to state assistance; and providing human resources in terms of capacities, skills, knowledge, and financial resources (Cheshire, 2015; Coates, 2015; Forrest et al., 2019; McEwen & Jones, 2012; Radcliffe, 2016). Lucini (2014) highlights the possibilities for civil society to

contribute to disaster resilience while taking into consideration the interconnectedness of issues of disaster resilience and the fundamentals of democracy, security, safety, and human dignity. Along similar lines, CSOs are considered as agents that promote community resources, such as collective identity, sense of hope, agency, altruism, trust, and security, that are also identified ways of promoting community resilience (Sousa et al., 2013). However, the critical literature on resilience problematises these very attributes of hope, agency, and security thrust upon individuals and communities at risk, under the pretext of building resilience (Bracke, 2016; Butler, 2016). The resilience discourse is critiqued for shifting the responsibility of the state on to the "grassroots population's willingness and openness to learn how to accept change as inevitable and how to improve the capacity to remain cohesive under pressure, despite poverty" (Ramalingam, 2013, p. 346). Thus, we need to discern the instrumental neoliberal use of the concept of civil society in the context of disasters from that of its transformative possibilities.

Although the literature captures the significance of civil society, its specific roles and functions in the context of disasters, and the actual contribution of civil society in the global south and especially in the Indian context has been limited. This is often attributed to the nature of state-civil society interface in the context of disasters (Özerdem & Jacoby, 2006), wherein the response has often been regarded as the state's responsibility. Özerdem and Jacoby (2006), while studying the role of civil society after the earthquake(s) in Japan, Turkey, and India, observe that a technocratic organisational perspective primarily guides the response to disasters. Therefore, the government institutions were the key players in disaster response. The disaster-hit communities were seen as victims and not as stakeholders possessing the valuable resources needed to respond to disasters. The CSOs, prior to the earthquakes, had low representation. Although many of them started emerging after disasters, they faced criticisms owing to organisational problems. In countries like India, there is a legislative commitment to integrate the community's perspectives in the decisions and ensure that their priorities are reflected in the state-run programme(s). On the ground, however, the public sector is still perpetuated as the "locus of control" (Özerdem & Jacoby, 2006, p. 102). The legislations are insensitive to the CSO's need for flexibility and autonomy in decision-making within the decentralised institutional setup (Özerdem & Jacoby, 2006).

Vaughan and Hillier (2019) note that the civic space is getting constricted, and the CSOs engaged in advocacy, transparency, and human rights are finding it difficult to operate in many countries. van Wessel et al. (2019) postulate that these constrictions are due to the changes in institutional controls over legal, financial, and regulatory matters. They also discuss the changing nature of civic engagement with the emergence of new entrepreneurs addressing 'socio-technical' systems in place of civil society actors focused on 'socio-structural' systems. "The advance of hybrid governmental/nongovernmental civic action structures has created bureaucratic governmentalities that privilege corporate formations" (van Wessel et al., 2019, p. 16). This results in the replacement of NGOs by state-controlled/headed enterprises addressing sociotechnical systems. The state only collaborates with those

CSOs which are compatible and accommodative of their respective bureaucratic processes and requirements. Most often, the CSOs seeking collaborations with the state tweak their roles to appear more relevant and are cautious in not being seen otherwise. Even when the roles of the CSOs and the state are well aligned with each other, they are observed to self-censor in light of the sensitivities. This leads to the CSOs structuring their practice by taking all involved—including the state—into consideration. In collaboration with the state, these organisations play an active intermediary role in state policy processes as they contribute to policy development, resource mobilisation, implementation, integration of local knowledge towards contextualisation, and translation of policy for public consumption (van Wessel et al., 2019).

Chowdhury (2018) notes that the proliferation of autonomous or collaborative organisations does not necessarily mean a vibrant civil society because often they are elitists, with hierarchical and non-participatory relations with organisations and stakeholders. They also face allegations of transparency and accountability, and of being agents of foreign bodies, serving the funders and donors and not their constituencies (Chowdhury, 2018).

Another issue with civil society in the context of disasters is regarding the technical and professional nature of these organisations that provide minimal space for emancipatory self-representation of the marginalised groups. In van Wessel et al.'s (2019) comparison of CSO initiatives in disaster risk reduction (DRR) with that of CSOs representing the rights of marginalised groups, it is evident that the organisations working in DRR are largely the professional ones, providing technical inputs. It was also found that the CSOs responded differently to the constriction of civic spaces, wherein DRR CSOs adapted to the constriction of civic space without endangering collaborative relations with the state. However, the CSOs working on the rights of marginalised groups make more attempts to strategically protect the space for the articulation of alternatives and mobilisation (van Wessel et al., 2019). The nature of representation that the CSOs align with are also often considered to be problematic. Though CSOs play a larger role in the marginalised sections claiming their rights, the nature of representation often does not build the ability for direct representation among these deprived sections. The representation of constituencies by CSOs is frequently limited to intermediary roles such as "connecting marginalized groups and the state, raising people's awareness of entitlements, articulating issues and needs, and translating to facilitate communication between marginalized groups and the state" (van Wessel et al., 2019, p. 8).

In the section earlier, van Wessel et al. (2019) identified six forms of representation that are primarily intermediaries, such as observers, grassroots technical and knowledge brokers/partners, facilitators, sensitisers, and advisors. Thus, for the CSOs, representation need not always involve giving voice to the voiceless or promoting leadership from among these groups. Hence, a critical review of the power relations between the CSOs and the groups they represent is essential. Direct forms of grassroots representation by marginalised groups should be differentiated from other forms of representation. Often, these deprived groups question the

authenticity of other forms of representation that exclude their voices and challenge the CSOs' lack of intention to address the underlying structural issues that have historically marginalised these groups (van Wessel et al., 2019). In the view of this, self-representation is seen as the crux of socio-structural transformation, especially among the most marginalised groups. As CSOs primarily take on technical and professional roles and not so much of representation of marginalised voices, we choose to focus on both formal and informal organisations at the grassroots, grounded in the principles of self-representation by constituencies. The following section specifically explores the existing literature on leadership among such grassroots mobilisation, as they are closer to the transformative agenda that is used to operationalise disaster resilience as stated in the first introductory chapter.

Civil Society Leadership

Leadership is not a commonly researched topic among civil society researchers (Baser & Morgan, 2008; Dym & Hutson, 2005; Hailey, 2006; Hailey & James, 2004; Hubbard, 2005). The limited literature that does exist is very diverse as the concept is employed differently in varied contexts. Researchers focus on different entities, such as NGOs, social movement organisations, CSOs, and civic associations, in their exploration of civil society leadership, sans much convergence in their definitions. Studies on these organisations are not very different from that of the mainstream organisational studies, which focus on the individual leader's leadership styles, skills, characteristics, and competencies. Facilitative, collaborative, and decentralised leadership styles in civil society yield better outcomes (Baser & Morgan, 2008; Collins, 2005; Crutchfield & Grant, 2008; Hailey, 2006), akin to findings in the wider leadership literature. Leaders in NGOs are expected to demonstrate competence in managerial and leadership roles (Hailey, 2006; Hailey & James, 2004), "diagnostic skills" (Malcolm, 2013, p. 17), "insightful agility" (Fowler, 2000, p. xii), "analytical and adaptive capacities" (Ebrahim, 2003, p. 1), ability to work across sectors and share leadership within organisations (Crutchfield & Grant, 2008), collective capability to balance diversity and stability (Baser & Morgan, 2008), and relationship skills (Baser & Morgan, 2008; Bird & Westley, 2011; Hailey, 2006; Stansfield, 2001), among others.

Another related area, from which a different understanding of civil society leadership emerges, is that of social movements. Leadership is often explored in relation to the emergence, development, and efficacy of these movements. The literature identifies social ties, social networks (Marwell et al., 1988), the relational context of shared cultural and religious traditions (Somers, 1994), political opportunities, availability of resources, mobilising structures, and framing processes, as key factors influencing the emergence and effectiveness of social movements (McAdam et al., 1996). Ganz (2011) gives prominence to leadership in social movements and articulates the specificities of leadership therein. He reasons that as social movements rely on volunteerism, shared commitments, and sustained motivation, leadership that frames opportunities as purpose in their narratives is critical to the

success of the movement, during uncertain and risky circumstances. Ganz (2011) acknowledges the significance of values and emotions in the leadership process and conceives the public narrative as a leadership practice of translating emotionally experienced values (Nussbaum, 2001) into action. The public narratives link the self (leader), us (members), and now (urgency) to bring about action in the face of uncertainty. Though the literature on social movements emphasises leadership practices, such as building relationships, narratives, devising strategy, and catalysing action, overall, the literature is scarce, and the focus continues to be on the leader-follower relationship.

Apart from understanding civil society leadership from the individual leader-follower frame, this literature also explores the specificities of the sector and clearly distinguishes leadership in the not-for-profit organisations from the for-profit ones. Researchers identify the specificities of the civil society context, which necessitates different leadership styles and competencies, such as the capacity to identify possibilities within an uncertain space, characterised by "inherent tensions and paradoxes and contradictions that cannot be fixed" (Malcolm, 2013, p. 18). Grounded in the unique ethos and values that civil society stands for, research on civil society leadership rejects the individualistic focus and explores the possibility of leadership by all, as engaged in by community members (Davis & Sumara, 2006). Along similar lines, Raelin (2003) introduces the concept of 'leaderful', which is understood as the leadership of everyone in the organisation as opposed to the traditional concept of the leadership of a single (or few) person(s). The four dimensions that characterise leaderful are as follows: (i) concurrent, having multiple leaders in the team; (ii) collective, where leadership is not held by an individual leader; (iii) collaborative, incorporating participatory decision-making; and (iv) compassionate, focusing on the whole person rather than the dispassionate focus on work tasks and boundaries. The concept of leaderful is grounded in the understanding of civil society as an overarching sphere that enables all other interdependent spheres to come together to define and build a good society. From this viewpoint, a leaderful community or civil society is understood as a "space where people participate from their many different spheres/roles in society (in family/neighbourhood/community; whanau/hapu/iwi; local/regional/national; government/business/NGOs/households) in a leaderful way to define and build a 'good society'" (Malcolm, 2013, pp. 132–33).

Drawing from the complexity theory, Malcolm (2013), in her study of civil society leadership, conceptualises civil society as nested complex adaptive systems and shifts the focus from the leader-follower dynamics to that of the conditions that support the emergence of grassroots leadership, that is, "the fertilizer that speeds up the distributed intelligence growth" (McKelvey, 2008, p. 239). Civil societies as nested complex adaptive systems need both diversity and internal redundancy or sameness to facilitate adaptive capacities to manage uncertainties. This is unlike complicated systems with minimal redundancy that are role-focused hierarchical structures (Malcolm, 2013), thus, requiring different forms of leadership for effectiveness.

Civil society leadership in the context of civic associations has furthered the understanding of leadership for everyone. Researchers distinguish civic association leadership practices from that of for-profit and non-profit bureaucratic organisations, with centralised decision-making and paid employees providing services to customers who do not participate in the internal affairs of the organisation (Andrews et al., 2010; Knoke & Prensky, 1984; Smith, 2000; Wilson, 1973). The differences in leadership practices with regard to eliciting compliance from paid workers and commitment from volunteers have significant implications for the nature of transformative change at the grassroots, especially the emergence of grassroots leadership. Thus, the replacement of civic associations by service providers and professional advocacy groups erodes valuable civic infrastructure (Putnam, 2000; Skocpol, 2003; Walker, 2009; Weir & Ganz, 1997). As scholars of social movements were preoccupied with the policy impacts of a particular movement in establishing its effectiveness, the civic association literature was more focused on the "organizational effectiveness at developing leaders, mobilizing participant and gaining recognition in the public arena" (Andrews et al., 2010, p. 1193) and which, in turn, strengthened democracy and civil society. Since effectiveness had different meanings for organisations with diverse organisational characteristics, operating in different environments for different purposes (Cameron, 1986; Herman & Renz, 2004; Knoke & Prensky, 1984), a range of criterion were used by different scholars.

The limited literature that exists on civil society leadership is very diverse as it is grounded in different conceptions of civil society, emerging from different theoretical, historical, and practical contexts. This results in the work of civil society theorists often lacking rigour, contributing to vagueness and lack of clarity. To be able to explore civil society leadership in the context of disasters, which has not been the focus of exploration in the past, one must start with the contextualisation of the concept of civil society within the appropriate theoretical and historical context in which the study is situated.

Theoretical Context

Civil society, as a concept, is interpreted in very many ways in different historical and practical contexts, to the extent that it fails to exist as an independent idea. It is often contrasted against the following three concepts: "the natural society or state of nature as in the modern contract theory," "the state as in the liberal tradition," "the community (Gemeinschaft) in a theoretical tradition of modern sociology" (Kaviraj, 2001, p. 288). These different conceptualisations of civil society emerge from the varied intellectual and practical opposition to established oppressive structures in different historical and sociopolitical contexts. For example, in the Polish context of totalitarianism and its rejection, the "Marxian defence of the oppressed of civil society through the state had become the defence of the state-oppressed through civil society" (Baker, 1998, p. 142). Hence, civil society theorists warn of the dangers of transporting concepts emerging from countries in a particular

historical context to others that do not necessarily share the same preconditions (Kaviraj, 2001). Thus, a universal conceptualisation of civil society and its leadership in the context of disasters is not aimed at, as part of the theoretical exploration summarised in this section. However, towards the end of this section, we hope to arrive at an appropriate concept of civil society for the exploration of disaster resilience leadership in the Indian context.

Though the contemporary concept of civil society is primarily staged in opposition to the state (Baker, 2002), Jensen (2006) identifies three dominant theoretical conceptions of civil society, namely the sphere, the Lockean, and the Scottish concepts. In the sphere concept, civil society is conceived as a separate arena for the diverse and cooperative pursuit of individual and social goods by citizens. They learn the core prerequisites of citizenship in a modern democracy, within a civil society context, characterised by open deliberation and engagement. In the Scottish conception, civil society is the space to reconcile private and individual interest with that of public and social goods (Seligman, 1992). Following is the Lockean concept:

> whenever, therefore, any number of men are so united into one society as to quit everyone his executive power of the law of nature and to resign it to the public, there and there only is a political or civil society.
>
> *(Locke, 1988, p. 325)*

Thus, civil society becomes the solution to the problems posed by the state of nature, by providing for institutions and the power to enforce (Dunn, 2001).

Though the contemporary discourse is primarily preoccupied with the sphere concept of civil society that pitches it against the state or the state and the market (Baker, 2002), there is no consensus even within the contemporary discourse about the location of the sources of civil society that must and can moderate the state (Khilnani, 2001). Different advocates identify the three domains of economy, society, and culture, as authentic sources that could limit the state, and these perspectives could be identified with the liberal, radical, and conservative cultural positions, respectively (Khilnani, 2001). In the liberal position, civil society derives its power from the economy, property rights, and the market. The radical position conceptualises civil society as an autonomous society, independent of the market and the state, wherein there is a free public exchange of ideas, formation of associations, and discovery of interests to be collectively pursued. The conservative position considers civil society as a historically inherited set of cultural acquisitions or manner of civility that moderates the relationship between individuals and groups (ibid.).

As stated in Chapter 1, one of the key dimensions operationalising disaster resilience leadership is that of the public or common good. Since capitalism has not lived up to the expectations of the 18th-century philosophers in the modern world, with regard to the actualisation of public good, especially in the context of the developing countries, we choose to look at the domain of culture and society

as sources of civil society in the context of disasters. Since scholars, who hold the conservative position, do not see the set of cultural acquisitions as universally available, we turn our attention more towards the domain of society as the location of the sources of civil society, in the context of disasters.

However, going beyond the state-centric contemporary discourse which centres on civil society restricting or limiting the state, we also seek to explore civil society leadership from a lens of 'civil society first' as opposed to the lens of 'the state first' (Battek, 1985; Benda, 1985; Marcos, 2001; Michnik, 1981). Within contemporary discourse, the civil society–state relationship could be broadened by drawing upon the following three possibilities (which overlap very much in different practical contexts): self-organisation outside the state (civil society–first, self-management/self-limiting mode of civil society practice), self-organisation within the state (state-first, self-determination mode of civil society practice), and the Marxian possibility of the state and civil society being the same (Baker, 2003). Considering the sociopolitical context of India, its relatively young democracy, and the popularity of neoliberalism over socialism, the Marxian conception of civil society is not pursued further. However, the possibilities of self-organisation within and outside the state open a range of practical contexts to explore disaster resilience leadership. The possibility of self-organisation within the state would look at the potential of civil society in the service of the state and how it could further the representation of interest in the state (make the state responsive, inclusive, and accountable) (Baker, 2003). It could look at civil society contributions to volunteerism, collaborations, civic infrastructure, and democratic claim-making. Considering the complexities of modern social structures, scholars often shunned the social utopias of doing away with power, government, and the state. However, they do not reject the possibility of an independent life of society, articulated as "the future democratic, self-managing socialist society" (Battek, 1985, p. 108), the parallel polis (Benda, 1978), antipolitics (Havel, 1988), communitarian civil society or the "expansion of direct democracy in favour of the gradual dismantling of representative democracy" (Uhl, 1985, p. 191).

The possibility of self-organisation outside of the state emerges from the Polish and Czechoslovakian approach to civil society. The Charter 77 model (informal civic initiative in the Czechoslovak Socialist Republic from 1976 to 1992) conceives a community that is "a free, informal, open community of people . . . united by the will to strive, individually and collectively, for the respect of civic and human rights in our own country and throughout the world" (Declaration of Charter 77, January 1977, p. 165), as the crux of civil society. Keane (1999) captures the Czechoslovakian thinker Václav Havel's vision of civil society as follows: "[T]he cultivation, from below and against all odds, of institutions that can develop 'the independent life of society' and thereby empower the powerless [was Havel's vision]" (Havel, 1979, p. 286, emphasis in original). The Polish experience has shaped the methodologically individualistic practices of civil society in a totalitarian context, where collective action is forbidden. Similarly, the Czechoslovakian approach advocated the privatist retreat into the microsphere of family and friends,

to an extent like those advocated by Gramsci and Hoare (1971) and Tocqueville (1988), who emphasise non-economic free associations around diverse interests. This privatist retreat is seen as an antidote to the alienating bureaucratic political order. However, scholars recognise the omnipotence of power even in the informal organisation and, hence, make clear specifications of the nature of privatist retreat and its overall purpose. For example, Havel (1985) emphasises informal structures that are "held together more by a commonly shared feeling of the importance of certain communities than by commonly shared expansionist ambitions directed 'outward'" (p. 93). He conceives of non-bureaucratic informal temporary structures of voluntary associations to address diverse needs and purposes. As the accumulation of power is to be made alien to these structures, they are conceived to be temporary and to be dismantled once the purpose is achieved. Thus, these structures are more community-like rather than that of organisations and institutions.

These theoretical reflections on civil society emerging from the Czechoslovakian and Polish contexts need to be read along with the German theorisation of civil society in relation to the community. Ferdinand Tönnies (1931, 1955) differentiates between the two basic forms of coming together of human wills as Gemeinschaft (community) and Gesellschaft (civil society), very similar to the distinction made between community and society. The Gemeinschaft operates around the common determinate will, shaped by the lasting and genuine forms of living together, with family, neighbours, and friends (like the concept of the community). Gesellschaft, however, is understood as a mechanical transitory and superficial aggregate of a multitude of individuals not dependent on or related to one (same as that of a society). The distinction of civil society from a community or communitarian civil society is significant for the study of civil society leadership in the Indian context, as third world civil society is often governed by Gemeinschaft-like principles. Though communitarian civil society is an antidote to an alienating bureaucratic political order, it is also considered to be counterproductive to the working of a modern constitutional state, when the boundaries between the state and civil society get blurred. In a country like India, where the policy benefits are extremely inadequate to reach all potential beneficiaries, the poor must often politically negotiate to claim benefits. These negotiations are often built over associations of communitarian ascriptive loyalties, identity politics, political constituencies, and stewardship, thus reducing the civil society to one of political society (Chatterjee, 2001).

Dunn (2001) and Seligman (1992) problematise the conception of contemporary civil society theorists as missing the core essence of the concept, particularly the difference between a problematic and well-organised social arrangement that is key to the idea of civil society. The Lockean concept that contrasts natural society or the state of nature with that of civil society is relevant in the disaster context, which is conceived as the second state of nature (Zack, 2010). The Lockean concept of civil society conceives humans to be cooperative and industrious in the state of nature, and believes that society could exist independent of the government in case of a collapse. However, in current times, the modern lifeworld makes it

impossible to self-subsist in the absence of a government, thus, resulting in a second state of nature in the context of disasters and catastrophes. The temporary dysfunction of governments at the time of disasters, the second state of nature and the reliance on private measures by citizens for individual survival, the immediate relief, and the response, raise fundamental political questions. The second state of nature is a breach of the government obligation to provide for life circumstances that are better than the first state of nature. Thus, in the second state of nature, the government has an extended obligation to ensure that citizens are better off. Zack (2010) also distinguishes the humanitarian aid rendered by the state from that of the obligation to adequately prepare and respond to disasters, since rights are recognised with the fulfilment of obligations. Therefore, most government interventions are primarily targeted towards enhancing the capacity of communities to self-organise in the immediate context of the disasters. However, some scholars doubt the efficacy of such top-down exercises of building civil society responses in the immediate aftermath of a disaster (Chandler, 2000; Frankel, 1997; Saward, 1998).

As we explore theoretical perspectives and case studies of government interventions towards DRR and resilience in the thematic section on bureaucratic and political leadership, we choose not to extend the Lockean concept of governmental obligation into the exploration of civil society leadership for disaster resilience. Moreover, as the government dysfunction is most often temporary and since the focus of our study has been beyond the phase of urgency, we do not engage with the Lockean concept of the state of nature and the community's capacity to self-organise in the immediate aftermath of a disaster. However, as the study of disaster resilience leadership primarily focuses on socio-systemic and structural transformations, especially in the context of DRR, we extend the lens of the Lockean social contract to explore the extent to which the government supports civil society initiatives, in line with its obligation to prevent, prepare, and respond to disasters.

Historical Context

Colonialism, liberalism, and capitalism in the 18th and 19th century are considered to be collectively responsible for the introduction of modern political practices, including the concept of civil society, in the global south. Colonial control ended up replacing political regimes with the establishment of a state very similar to the modern kinds in the colonies. The developed legal languages of highly differentiated legal subjectivity and the conceptual language of natural rights were alien to most of the colonies. Though these cultures had a notion of society separate from its political structure, the state's legislative function of setting norms for society was marginal, prior to the colonial conquest. These societies were primarily restrained by religious rules of conduct that were natural/divine. Thus, in traditional societies, the political authority's legislative competence was restricted, the aspects of society's life were not controlled by the state, and the need to protect society from the encroachments of the state was also not felt. As the political authority was not

centralised, a civil society, which combines all other forms of social organisation against the state, never emerged.

It was colonial sovereignty, then, that laid the base for ideas of civil society in different ways. Educational reforms produced a new Europeanised elite, whose imitative enthusiasm led to a literary public sphere, a public arena of discussion centred on the advent of newspapers, and the formation of associations based on interests. Colonial administrations themselves made an implicit division between the true province of state control and that of unregulated society. The result was that colonialism contributed to an inchoate civil society in the Indian context. As part of the nationalist movement, political groups, mainly comprising the modern elite with nationalist ambitions, claimed that certain aspects of social life were the province of decision-making by the indigenous people rather than the foreign state authorities. However, during colonial times, all stakeholders, including the British authorities, the political elite of the nationalist movement, and even the bourgeoisie, demonstrated civility of the highest order that was very unlikely in other colonies. But the acceptance of a liberal individualist conception of civil society was limited to a much smaller privileged circle and did not extend to the larger masses of the peasantry and country-dwellers. The limited civil society that existed, however, had significant implications for post-colonial politics.

The civil society of the colonial times comprised associations of two types: the open-access ones established for the cultivation of science, Western education, newspapers, and journals; and those based on ascriptive loyalties of caste, homeland, or language, like the Kayastha Sabha, whose membership was not open to all. The civility demonstrated during the colonial period continued in Indian politics for about two decades post-independence. The modern elite who could build a strong civil society was now part of the state and focused more on using the state machinery instead of building a strong civil society. Moreover, the illusion of consensus created by nationalism discounted the need for an active civil society. In the 1970s, the concept of democracy had reached the peasant electorate who did not much understand the principles of association, based on a transient constellation of interests. This is how associations, based on ascriptive loyalties, started influencing Indian politics. Though the Indian elite that constructed the institutions of political life had created limits on its power, the influence of associations of ascriptive loyalties started distorting electoral politics and blurred the difference between state and civil society, making it impossible to imagine a civil society independent of the state. Chatterjee (2001) prefers to refer to associations in the Indian context as a political society rather than right-bearing civil society. Within this historical context, this section further captures the emergence of civil society and its interface with the state in the post-independence era.

In the late 1940s, freedom fighters and other socially concerned individuals took up the task of reconstruction. Mahatma Gandhi's work (among that of others) on rural development was crucial in sending thousands of volunteers to work in rural India, in the areas of education, health, and employment. Later, these actions shifted their focus from issue-based action to political content, aimed at nation

building. After independence, there were changes in the perception of development. In the 1950s and 1960s, economic growth was found to be the answer to poverty. This was accompanied by welfare programmes for the poor, poorest, and women. The government ministries (namely, agriculture and rural development) held responsibility for facilitating community development through welfare programmes across the country. The Christian missionaries also got involved in these programmes, especially in the South and the Northeast. Influenced by Marxist analysis, many critiqued the government's development paradigm, which contributed to the emergence of an alternate perspective of development and the role of NGOs in it (Bhatt, 1999). In 1967, to tighten the regulation of NGOs and to ensure that the foreign funds are utilised for purposes that keep up the sovereignty of the Indian Republic, the Indira Gandhi-led government passed the Foreign Contributions Regulations Act (FCRA). There was a promotion of state-led development, which was more about imports and programmes that were labour intensive. This led to the formation of NGOs working on issue-based struggles of land reforms, gainful employment, transparency, inflation, and government atrocities during emergency rule.

By the mid-1970s, the impact of Marxism on churches led to a split among these institutions. Soon thereafter, the Janata Party rose to power in 1977, awakening hopes in the poor and other social action groups, but it failed to deliver. This led to disillusionment among various social groups, with regard to the transformative change in society emerging from political processes. In the early 1980s, a need was felt for people's participation, sensitisation, and empowerment in poverty alleviation. Post-emergency, church missionaries, the Left, and the Gandhian and Lohiate movements converged on activities at the grassroots level. They started focusing on empowering the most marginalised sections to influence the different oppressive structures of society (social, economic, and political). Other social action groups carried out their work availing external funds for charity and developmental activities. In the 1980s, with the involvement of external agencies that were funding the NGOs, the charity and welfare components were replaced by integrated development models. The differential impact on diverse groups among the poor (based on class, caste, gender, and ethnicity) was also investigated. The grassroots-level development ideology and initiatives were powerful enough to shape the priorities of funding organisations (Bhatt, 1999; Rajasekhar, 1998).

In the early 1980s, the activities of the Gandhi Peace Foundation (GPF), a consortium of 950 NGOs, was subjected to scrutiny by a presidential commission, known as the Kudal commission (Kilby, 2006). Though there were no charges made against the GPF, it was used as a stick against funding of NGOs in India and a firm step towards disciplining these organisations to apolitically support the state and its welfare programmes (Kilby, 2006). The NGOs were recruited by the international NGOs and the State to operationalise its poverty alleviation and basic needs programme. The Planning Commission, too, recognised this in the Seventh Five Year Plan document (1985–1990). By the 1990s, with the prominence

of global financial and political institutions and their New Policy Agenda on aid transfers, the popularity of NGOs grew among the state and aid organisations. Economic growth was considered to be the key strategy for poverty alleviation, again like the one promoted in the 1970s but with more market-led over state-led, export-oriented over import-oriented, capital intensive over labour intensive, and women inclusive rather than women exclusive. The activities of the NGOs, over the years, resulted in more broad-based sectors. Though the government does not fully regulate the NGO sector, it disciplines NGOs as agents of empowerment that remain indifferent to the political processes that play out in the country (Kilby, 2006). In the late 1990s and early 2000s, large NGOs receiving international funds became more vulnerable with the following amendments to the FCRA: mandatory renewal of FCRA registration every five years, capping of administrative charges levied by the organisation(s), and limitation in the nature of civic engagement. The early 2000s presented both possibilities and barriers for NGOs engaged in grassroots development and empowerment. Enhanced decentralisation with the Panchayat Raj Act of 1992 facilitated the mushrooming of grassroots NGOs (Kilby, 2006). This proliferation, in turn, resulted in competition for limited resources instead of coordinated efforts, leading to the reduction and fragmentation of the net outcomes from the NGO sector.

Focus for Study of Civil Society Leadership

The literature summarised in the sections earlier lays out the practical, theoretical, and historical context for the study of civil society leadership for disaster resilience. In the practical context of disasters, civil society's contribution has been minimal when compared to that of the state. The exploration of civil society in the context of disasters has been primarily limited to CSOs, and most of these have provided technical or professional services, rather than addressing issues of grassroots-level representation. Most CSOs have been engaged primarily in the post-disaster context, with little emphasis on risk reduction or resilience initiatives. Thus, the case studies chosen for this thematic section focus on CSOs, civic associations, and movements that primarily work around the issue of representation and claims-making, towards building disaster resilience among the most marginalised groups, in the context of disasters. We explore the unique factors that contribute to the emergence of grassroots-level representation and claims-making, especially in the non-urgent phases of DRR and long-term recovery.

The exploration of civil society leadership in the context of disasters is almost negligible, and the limited literature on civil society leadership is fragmented, due to the wide range of theoretical and conceptual perspectives that guide these explorations. The literature on civil society leadership is primarily about the leadership of CSOs and of social movements. The individualistic leader-centric exploration is prominent among studies that focus on CSOs. Studies in the leadership of social movements and civic associations focus on grassroots leadership emergence, which primarily contributes to the direct representation of marginalised groups

and their voices in the claims-making process. As the nature of civil society is shaped by its sociopolitical context, a third world country's civil society is unique and different from that of its Western predecessors. In the Indian context, civil society comprised institutions of modern associational life that emerged as part of the anti-colonial struggle, embodying the desires of the nationalist elite to replicate institutions of Western modernity. However, this form of civil society was limited to elite circles and did not extend to rural masses and peasants. With the expansion of democracy, the communitarian type of civil society became prominent, although it was counterproductive to the working of the modern constitutional state. Communitarian civil society, primarily based on ascriptive loyalties of caste, homeland, and language, are counterproductive to the working of the modern constitutional state and the representation of the minority and marginalised groups.

We draw upon the theoretical lens of self-organisation within and outside of the state to explore the assertions of marginalised groups in the Indian context for representation, claims-making, and provision of civic infrastructure in the disaster context. The historical context also highlights the changing nature of civil society–state relationship in the Indian context, characterised by the constriction of the civic space of certain kinds of CSOs and the emergence of new hybrid forms of social entrepreneurs. Accordingly, the case studies in this section are analysed to understand the nature of the civil society–state interface in the disaster and non-disaster context, and its implication for grassroots-level leadership development and resilience.

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7

CIVIL SOCIETY LEADERSHIP FOR DISASTER RESILIENCE

Case Studies and Analysis

In this chapter, we take an in-depth look at four case studies of initiatives aimed at building the disaster resilience of the most marginalised sections in India. All four share a common thread of grassroots representation, claims-making, and leadership in the context of disasters. However, each presents a unique variation of the same. We explore the unique factors that contribute to the emergence of this thread, especially in the non-urgent phases of disaster risk reduction (DRR) and long-term recovery. We draw upon the theoretical lens of self-organisation within and outside the state to explore the assertions of the marginalised groups in the context of disasters. The case studies also focus on the civil society–state interface in both the disaster and non-disaster context, and its implication for grassroots-level leadership development and resilience.

The cases were purposively chosen from the larger pool of civil society initiatives in the country, primarily based on their focus on marginalised groups, grassroots leadership approach, and different categories of civil society that they represent. The Visthapit Mukti Vahini (platform to liberate the displaced) is an initiative by the most marginalised communities in Bihar and their efforts to address the disaster risk they face and recover in a sustainable manner. Though similar to the social movement category, they are not large enough and would fit into the grassroots movement category. The case of the Young Mizo Association (YMA) is a typical case of a civic association fashioned along the lines of the Western concept of civil society to address the needs of a community at the margins. However, the civic association draws from the cultural context of Mizoram, is built around the Mizo ethnic identity, and is a significant contributor to the consolidation of the Mizo identity. The two civil society organisations included in this chapter are the Self-Employed Women's Association (SEWA) and the Area Networking and Development Initiatives (ANANDI), which represent the most marginalised women in Gujarat. Though both organisations work to promote grassroots leadership and

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empowerment of women, their approach and programmes vary, depending on the temporal context of organisational emergence and changing institutional framework that structures Indian civil society, especially in the disaster context. Our chosen four case studies represent a range of civil society initiatives during disasters in the Indian context, in exploring their emergence, nature of representation, nature of interface with the state and market, and contribution to building disaster resilience among the most marginalised groups and communities affected by disasters.

Collective Identity and Leadership for Disaster Resilience: Visthapit Mukti Vahini (VMV)

Emergence

VMV is a movement for the rehabilitation of communities displaced due to the *katav* (erosion) of 2002 in the West Champaran district of Bihar. The Gandak is the most important river(s) in the district. It rises in the central mountain basin of Nepal from the Sapt Gandaki (seven streams) that unite to form the river Gandak. After flowing for about 50 kilometres inside the Indian border, the river descends to the plains at Tribeni, where it meets the Sonaha and Panchnad Rivers. Being snow-fed, the Gandak is a torrential stream until it leaves the hills, becoming wider and less turbulent thereafter. The river is notorious for eroding its banks (Disaster Management Department, n.d.). The scale of damage by the floods would be so severe as to erode up to 1.5 kilometres of area within a day, washing away houses and displacing people.

When juxtaposed with the structural inequality that exists in the region, due to landlessness, the floods only add to the misery of the communities residing by the banks of the river. The Land Reforms Act of 1950 brought an end to the private ownership of several kinds of non-land immovable properties. The state government introduced the Bihar Agricultural Land (Ceiling and Management) Act in 1955 in order to prevent excessive private ownership of land (Joseph et al., 2021). However, it was stalled as the influential landowners resisted its implementation, showing their might. It was in 1961 that the Land Reform (Ceiling, Land Allocation, and Surplus Land Acquisition) Act came into effect in the state. It was revised in 1971 and again, in 1973. The law stipulated a ceiling of 45 acres for each family, thereby vesting landholding rights in a family rather than individual (Joseph et al., 2021). By doing so, it only served to increase the disparities in the distribution of land ownership in the state, as it allowed landowners to divide their land into smaller parts by registering each part in the names of different family members or that of loyal servants. It failed to achieve the desired outcome.

Most of the cultivated lands in such villages are under the control of landlords, and in several villages of West Champaran district, people own only homestead land; they have no land for cultivation (Ekta Parishad & Praxis, 2009). According to

a member of the VMV, at present, there are at least 35,000 displaced people in West Champaran (Joseph et al., 2021). A report submitted by the Tata Trusts (2016) points out that in Bihar, several villages continue to remain inside the embankment because they were not compensated or relocated. These primarily comprised landless labourers. Some were displaced to the roadsides without proper rehabilitation, exposing them to further physical vulnerability from both the embankments that are at risk of further erosion and the roadsides which increase their exposure to accidents, poisonous creatures, and eviction. Those displaced to physically vulnerable locations belong to the socially marginalised groups, such as the lower castes.

Their vulnerability can be linked to the lack of an enforceable right for homestead land for the displaced. For example, compensation is provided to those who lose their land to development projects, but it is denied to those who are displaced by the *katav*. This led to a collective struggle for proper rehabilitation in Bankatwa in West Champaran, aimed at rehabilitating the *katav*-displaced population in 2002. The displaced groups started a struggle called VMV, loosely translated as the struggle to liberate the displaced. Champaran is the region where Mahatma Gandhi's non-political grassroots struggle for the cause of the poor and exploited peasants (Champaran Satyagraha) began in 1917. The Jaiprakash Narayan (JP) movement in 1974 was also launched from West Champaran. The VMV was influenced by both these movements, based on Satyagraha (Joseph et al., 2021).

Role in Managing Disasters

For the displaced, displacement means loss of the land that is their main source of income. They are forced to work for daily wages as unskilled labourers whilst faced with a minimal support, system and challenges in accessing benefits and facilities, such as *anganwadi* (rural childcare) centres, schools, and voting rights.

The struggle against this state of affairs was started by Bijay Manjhi, who belongs to a Maha Dalit community, the Musahars. His community was living by the roadside embankment in Bankatwa after being displaced by the 1977 *katav* and floods. Manjhi, who was 25 years old when he started the struggle, realised that his community was being denied its right to basic amenities. He wrote a formal application in February 2002 to the Circle Officer in Nautan Block (of West Champaran district), requesting for the rehabilitation of 53 families in Bankatwa. While the request was for rehabilitation on vacant government land, the application also showed the total amount of land available in the Bankatwa region. Manjhi had studied the issue well and collected the necessary information and knowledge to make a strong case. The application was written by Manjhi without any help from people who were familiar with the methods and language of the government. However, it required the signatures of at least three other persons as witnesses. Manjhi had to knock on every door and eventually managed to get the signatures needed (one of the signatories later became a well-known face of the struggle).

Manjhi also faced cynicism and apprehensions owing to his young age and the failure of previous attempts. Two persons, who had attempted to seek rehabilitation,

had been allegedly bribed by local landowners to halt their efforts. Such cynicism did not deter Manjhi from continuing his struggle as he was convinced that his knowledge, awareness, education, talent, and confidence in himself would support his efforts.

Different methods were employed by the participants of the struggle to attain their goals. These included writing and submitting applications to the concerned authorities, protesting at the block development office, and asking candidates contesting elections to give written promises that their demands would be acted upon. The winning candidate was held to the promise he made. This ensured that the goal was realised: four decimal land to each displaced family for rehabilitation.

Initially, the membership only comprised communities that were displaced by the erosion. Two to three years later, it remained restricted to a collective few. The conflict of interest and misappropriation of the movement by the landlords (the dominant groups that were also participating in the struggle) led to a division of the larger group.

Not just those affected by the *katav* but also people from other villages in the district who were affected in other ways and needed land, joined the movement. They belonged to various marginalised communities: Musahars, Chamars, Dhobi, Mala, Beein, Ghoniya, Tusala, Kurmi, Lohar, and Paswan. Despite repeated applications and follow-ups, progress was very slow. It was at this juncture that Manjhi collaborated with social activist Pankaj, who had been participating in political movements including JP's movement in 1974. He had, over the years, strengthened his network with people from different disciplines: lawyers, activists, academics, and journalists. At a meeting in 2002, Pankaj said that he would extend his support and ensure that his demands for the rehabilitation of those residing in the embankments of Bankatwa are met. Since then, the two were in constant contact. Pankaj extended his support in cases of injustice. To him, in the absence of a proactive government in a democracy, the answer lies in people's pressure. Care should be taken to ensure that this pressure is channelised towards achieving something permanent and within the legal bounds so that it is enforceable and makes government officials accountable. Pankaj has been actively involved in another political movement, the Lok Sangharsh Samiti (people's struggle committee). The members of the Samiti provide support to social causes and arrange volunteers to participate in meetings and rallies whenever numbers are required. Thus, with the support of large numbers, the struggle for homestead land among the *katav* displaced population gained momentum. Other strategies that were implemented included fasting, holding protest meetings, picketing the BDO, and seeking resignation from the ministers. Later, in 2008, the *parchadharis* (those who possess title deeds to their land but have not been given legal ownership yet) came together to form a movement called the *Parchadhari Sangarsh Vahini*. The three organisations, the VMV, *Lok Sangharsh Samiti*, and *Parchadhari Sangarsh Vahini*, all functioned independently but supported each other whenever required.

The submission of the application needed pre-planing and had to be done by the individual. Pankaj recalls that sometimes, reminders and follow-ups were done over the telephone. But whenever required, a strike or blockade had to be organised, which called for mass participation. Besides mobilising a crowd, meetings are a prerequisite for proper planning. The last meeting before the event is usually organised the night before, in which all the action points and steps are discussed. The agenda includes mobilising resources, with the amount to be collected-decided by members and determined by location and scale. Funds were collected from every household. A household was to contribute Rs. Five if the event was organised at the block level, Rs. 10 to 20 if it was to be held at the level of the zilla or district headquarters, and at least Rs. 50 to 100 for state-level events.

The collective struggle resulted in 162 families being given a piece of four decimal land each as a homestead. It was a significant achievement for the people as they received more than what they had demanded. The awarded plot of land was named Gandhi-Ambedkar village. The region is still prone to flooding during the monsoons. However, the risks associated with being landless or losing their homestead land, due to *katav* caused by the flood, has been mitigated. This success made the people of Gandhi-Ambedkar village appreciate the value of their struggle, overcoming the scepticism they were often confronted with.

Changing Contexts

The struggle continues to date for victims belonging to the neglected and marginalised sections of the population, mostly comprising the displaced landless. While a significant number of people were a part of the struggle initially, there was a gradual realisation of the need to separate the people whose personal interests could prove harmful for the movement. The members had to first identify such individuals who were likely to have a conflict of interest with the larger goals of the struggle. It was found that such people tried to influence others to refuse support to the movement and that most of them were Yadavs, an influential caste. Once identified, the group used informal mechanisms to prevent their participation. The members of *Parchadhari Sangarsh Vahini* and *Lok Sangharsh Samiti*, along with individuals who were Pankaj's colleagues during the JP movement, worked together for the collective good of the struggle.

Empowerment also results in leadership emerging from within the community. The movement produced members who were critically conscious of the oppression by the landlords and state apathy. The new consciousness gave them the motivation to fight for their rights and take appropriate actions to realise these rights. Some were ready to take extreme steps and willing to even sacrifice their lives for the cause. These people reached a stage where they no longer feared the zamindars. Although the movement started in Bankatwa, it has now spread to 30 villages, which have joined either the VMV or the Parchadhari Sangarsh Vahini. Presently, out of the 30 villages, land has been acquired as well as allotted only to five villages. A total of 400 and 162 families were rehabilitated in the villages of Ratwal

and Bankatwa, respectively. Additionally, 33, 42, and 55 acres of land have been successfully acquired in Sishwa Mangalpur, Binnwah, and Pujaha Patjirwa villages, respectively. It is evident that the struggle has only just begun and is far from achieving its goals. The movement does not have a formal structure, but the vision and dreams of its members are clear, and there is a strong commitment that imparts strength to the people involved.

Ethnic Identity and Leadership for Disaster Resilience: Young Mizo Association (YMA)

Emergence

The YMA is a non-government, not-for-profit, and non-political organisation in Mizoram. It was established in the 1930s by a Welsh missionary to preserve Mizo culture and tradition. The roots of the association date back to 1895 with the advent of Christianity in Mizoram by a pioneer from the Arthington Aborigines Mission of London. Accordingly, the first Presbyterian Church was established in 1897, and a Baptist Church soon followed. As Christianity spread through Mizoram, the Welsh missionaries and Mizo Church leaders realised that there were youth who were not actively involved in the Christian church. Hence, the need was felt to mobilise them particularly. After discussion among the Christian youth and a missionary, Miss K. Hughes, at Mission Veng, Aizawl, in 1935, a group of Mizo Christian youth was formed which would function as an organised church. The organisation was formally constituted on 15 June 1935, as the Young Lushai Association and later renamed as the Young Mizo Association (YMA, 2021).

The members of the association identify themselves as Mizo, irrespective of the tribe they belong to, the language they speak, or the state they reside in. All members of the YMA are Mizo, and all Mizos are, by default, considered eligible to become members of the YMA, unless they are charged with committing a serious crime. The Mizos follow a way of life that is illumined by a moral code called *Tlawmngaihna*, meaning traditional ethics and values. According to Pillai (1999), it is practised both at an individual and collective level, transcending all boundaries including gender because of the eternal nature of its principles. In traditional Mizo society, the practice of *Tlawmngaihna* was taught in *zawlbuk* (bachelors' dormitory). The *zawlbuk* plays a crucial role in mobilising youth during emergencies, when villages were constantly at war (violent conflicts between tribes were frequent) in the past. Other practices related to *Tlawmngaihna* are *hnatlang* (voluntary labour) and *Mizo dan* (Mizo code of conduct). The *zawlbuk* declined as a social organisation with the abolition of the position of chieftainship in 1954, and thus, the need was felt for an institution that functions like *zawlbuk* to sustain the traditional values and moral of the Mizos. The organisation also derives from altruism that is shaped by kinship. In the absence of brotherhood, the organisation often used the notion of genetic fallacy so that members feel like kin. Such non-genetic brotherhood fosters a sense of fraternity and establishes powerful emotional bonds,

which may often lead to self-sacrificing behaviour, especially when a brother is threatened with harm. The Mizos have been successful in creating such fraternal bonds by consolidating Mizo *hnam* (nation). Those identifying themselves as Mizo share a sense of brotherhood and belongingness to one another and the organisation (YMA). The feeling of brotherhood becomes a tool for mobilising resources (human and financial) for the organisation, which is particularly useful in the disaster context.

Thus, a Mizo must show allegiance to his/her tribe (or nation) by being a member of the YMA. The person must also possess traditional values and ethics and must always be prepared/ready to offer voluntary labour (*hnatlang*). With the three key aims of making the best use of leisure time, striving for all-round development of Mizoram, and promoting good Christian life, the volunteers of the YMA work on social issues where the church cannot intervene and other activities that are not related to religion. These include sports and physical activities, public and personal hygiene, cleanliness and health, and maintenance of public toilets.

To uphold its core values and principles, the organisation framed a YMA *dan bu* (constitution), which explains how the organisation should function. Further, the organisation has ten commitments. These ideals are expected to be honoured by every member who also strives to live by the motto *Tanpui ngaite tanpui*, which means 'help the needy'. All the leaders in the YMA work on a purely voluntary basis and are elected democratically. Some of the leaders hold full-time jobs in the state government. They make time for YMA activities that call for considerable personal sacrifice and sometimes, even stepping out of their individual comfort zones. Even though the organisation was constituted to preserve customs and traditions, it now actively engages in the field of disaster management with the changing nature and scale of disasters in the state.

Role in Managing Disasters

The YMA enjoys the community's trust and acceptance because of the manner of its functioning. This has helped the organisation grow, particularly in disaster management. One of the 18 subcommittees in YMA is the Disaster Management Subcommittee, constituted in 2001. Although the YMA has always been involved in disaster management, the formation of a subcommittee helps to strengthen its efforts in the area. There are no guidelines or selection criteria for nomination to the subcommittee, and allocation of work depends on the interest and experience of the volunteers. Despite the presence of formal institutions, such as the National Disaster Response Force (NDRF), the subcommittee felt the need to have a team that can act swiftly in times of crisis. Accordingly, the Disaster Response Team was formed in 2017. The creation of such a team was necessitated by the experience of inefficient response of formal institutions during a disaster. A Disaster Response Team consists of at least 20 members, who are mostly long-serving and nominated by their respective branches. Most members have had experiences in responding to events and disasters at the community level. Their knowledge has been gained from

their association with disaster-related events in their respective localities. Those who have not had such exposure are trained by the more experienced members. This process has helped in empowering the community and building its resilience.

Disaster is understood in Mizo society as *chhiatrup* or sudden onset of crises. It is also defined as "any hardships/pressing situation demanding an external intervention." Such situations arise mostly due to a lack of financial and human resources and capital. It could even be an individual crisis and not necessarily that facing a group or community. Though there is no exact term in Mizo for the expression 'disaster management', the essence of the action is broadly defined as helping the needy or vulnerable in the community. It encompasses all activities irrespective of the cause of the event and cuts across the different cycles of disaster management, namely, pre-disaster, during disaster, and post-disaster. The types of pre-disaster activities can be broadly divided into two main categories, which are based on the definition of disaster: routine and non-routine. Such activities can include, for example, construction of houses for widows and handicapped people, blood donation camps, and contribution and collection of food as the necessity arises. Some branches organise concerts to raise donations to help the needy in their locality.

To respond to a crisis or a non-routine event, most members of the YMA are appropriately trained or are being trained. Training is provided mostly by the NDRF and the Disaster Management and Rehabilitation Department (DM&R). There are two reasons for conducting training: supply and demand. First, when experts from the NDRF or DM&R organise a training programme based on their modules and according to the mandated norms, it is for supply. Here, training is given to the YMA members without it being requested. This is done in the case of a felt need. The headquarters communicates it to various branches (within Aizawl city), inviting the participation of interested candidates. The lists of nominees are sent to the office. After the selection of the participants, purpose-specific training programmes are conducted for them. Second, training based on demand is usually done when a branch of the organisation requests its headquarters for training. The need for training is identified by the branch itself and is based on actual requirement. In such cases, the YMA either contacts the formal stakeholder for organising the training or arranges training for the leaders of the organisation, most of whom have undergone multiple training sessions and have even attained the status of trainer of the trainers. At least 208 YMA volunteers have received intensive training in disaster response at the SDRF Training Centre from the NDRF.

Though there are multiple stakeholders in the training process, there is little possibility of duplication of content because of the diverse nature of the training programmes. Training given by the NDRF is considered less helpful, as they have not been contextualised for Mizoram. In comparison, the training provided by the Central Young Mizo Association (CYMA) is seen to be more helpful since it contextualises them and designs the sessions considering the practicality of the situation in the state. Rather than complicating the rescue process, it tries to address the need to simplify certain survival tips. This is done to instil in people's mind that disaster management/response is not a foreign concept, which requires heavy

machinery or sophisticated technology. Responses require having a little bit of common sense, being aware of one's surrounding, and making use of the available resources depending on the situation. Awareness develops from traditional knowledge. The disaster subcommittee also helps in organising material procurement and training. For example, it arranged for helmet-mounted torchlights, *silpulins* (a traditional tarpaulin), and so on, from the DM&R and the NDRF.

During natural events, like deaths, the YMA is involved in the funeral process, which includes the organisation of funerals and support to the bereaved families. After the funeral service, a few YMA volunteers stay with the bereaved family for about a week. It is a symbolic act to let the family know that they are not alone. Also, the organisation arranges YMA nights which include prayer services, singing, and eulogies of about two hours' duration.

In the event of non-routine situations, such as drowning (*tui tla*) or a person missing (*mibou*), the YMA springs into action. First, CYMA leaders are informed about the incident (or situation). Depending on the case, the matter is communicated to the central office in Aizawl. On reaching the site, the leaders set up a rendezvous, which becomes the information centre. Decisions are taken on the spot. There is no guideline or plan for carrying out the tasks necessary in these situations. Thus, a situational analysis is carried out, and information is gathered to help plan the course of action. Once the plan is ready, all volunteers are required to assemble at one place, which is usually the information centre, if the terrain permits. They are briefed about the work and allocated their tasks. The flow of information happens both ways: the information centre to the site of search operations and the search site to the centre. Thus, the centre becomes the conduit of all information. The search is carried out as *hnatlang* (in collective capacity) under the YMA's banner for seven days as is the practice in Mizo tradition. After the seventh day, the YMA's role ends, but the search can be continued by family and friends in a personal capacity. In this case, the volunteers who may continue to be associated with the search will no longer be representing the YMA. However, it is the usual practice to continue to search till the person (or the body) is found.

In non-routine events, the role of the YMA is mainly to manage the crowds and carry out certain tasks and activities in a coordinated manner. The approach is the same even when an event occurs on a larger scale, such as landslides, building and quarry collapses, and forest and residential fires. If the situation can be contained, the volunteers act immediately. However, if manual efforts are not possible, instructions are given to the volunteers to wait till heavy equipment is made available: earthmovers and excavators (in the case of a landslide, building and quarry collapse), high-pressure hoses (in case of accidental fire), and so on. The post-disaster activity majorly comprises resource mobilisation for those affected by disasters. Resources are mobilised in various ways: having door-to-door collections by volunteers or keeping a donation box in a busy street (with a message stating the purpose for which the donation is sought). The YMA leaders decide the strategy by which donations would be collected depending on the nature and scale of the disaster. To help in the decision-making, the major losses are divided into eight broad

categories: loss of life, injuries, houses completely damaged (not fit for rebuilding), damaged houses (could be rebuilt), partially damaged house (but cannot be rebuilt), partially damaged house (could be rebuilt), tenants (loss of property), and other losses. The categories of fully and partially damaged houses are decided based on the type of land and location of the house.

Changing Contexts

For the operationalisation of the activities and their sustenance, the YMA has depended on membership fee for financial resources. There are two types of memberships: annual and life. The difference between the two types is in terms of amount and the frequency of fee payment. The annual membership fee is Rs. 5. Life members pay a one-time contribution of Rs. 500. Currently, there are 404,722 registered members across all the YMA branches. Further, every branch has an endowment fund fed by a cemetery fee which is collected annually by the branch for use in times of tragedy. The branch also uses various means to mobilise funds, such as by the sale of the YMA *dan bu* or annual calendar. At the headquarter level, the regular source of funds is from the branches. The CYMA sets a budget for each level at the beginning of the year, determined by the total number of members at each level, and is conveyed to the respective subheadquarters in the beginning of the year. Besides this, each branch pays two types of fees directly to the headquarters: an affiliation fee (for a newly formed branch) of Rs. 500 and an annual fee of Rs. 200. The branch will not have any voting rights at the election during the general conference, if it fails to pay the annual fee. Each branch is allowed two votes, irrespective of the number of members.

However, over the years and with the spread of the organisation to other states, the sources of funding and the mode of operations have shifted. The YMA covers the entire state of Mizoram and a few other Northeastern states, including Manipur, Tripura, Assam, and Meghalaya. Now, besides regular funding, each subcommittee is responsible for overseeing various projects that concern its area of work. The subcommittees collaborate with other organisations, not necessarily for mobilising funds but also for the benefit of the larger society. For example, the Raja Ram Mohan Roy Foundation provided funds for libraries. The YMA now owns stalls, owns fish ponds, and pursues other opportunities for raising funds so that it can be self-reliant and its income improves and becomes more stable. A more recent area of focus is its work for the preservation and conservation of forests.

Women-Centred Leadership for Disaster Resilience: NGOs Being Led by and Working with Women

The lack of access to resources has a significant impact on the vulnerable sections of society. Disasters exacerbate these vulnerabilities and consequently, adversely affect their rate of recovery. One's access to resources is based on social and economic relations, including that of ethnicity, gender, status, age, access to information, social

networks, money, rights to the means of production, and access to tools and equipment, among others. The access to resources of all kinds, be it material, social, and/or political, all of which determine the access to wealth and power, are major determinants of vulnerabilities across a range of groups. And those with better access to these are less vulnerable to hazards, even being in a position to avoid the disaster altogether (Twigg, 2015). While they may face greater monetary losses compared to the sections with lesser access, they would generally recover faster than the latter.

This case study looks at two developmental organisations based in Gujarat, ANANDI and SEWA, and their initiatives in the context of disasters and resilience building. Though both are NGOs with a focus on gender and inclusion, their approaches are different. Both these organisations have been working with most marginalised women, namely Dalits and tribals. They illustrate how civil society organisations (CSOs) build the capacities of certain vulnerable sections of the population, primarily women, and aid them to come out of poverty and other vulnerabilities. Disasters often create an opportunity to address the root causes of vulnerabilities, and by upsetting social norms, they often create a space to challenge the inequalities and push forward resilience-building programmes. Addressing social inequalities, like gender disparity, is viewed as a long-term and multilevel process that must be incorporated into formal disaster institutions and policies from local to national levels, rather than as a one-off project activity. Women, despite their crucial role in the economic sector, are undervalued and under-recognised. As a result, they are unable to develop to their full potential because of a lack of autonomy as well as restricted access to resources. This not only determines their cultural, social, political, and economic status in society but also exacerbates their exposure and vulnerability to disaster risk.

Self-Employed Women's Association

Emergence

SEWA is a network of affiliated organisations, including cooperatives and service agencies, and is regarded as a movement. Each of the affiliates is assigned a particular task, as service provider or community-based initiative. SEWA's history dates back to the 1970s, when a few poor, illiterate, and seasonal migrant women from the rural regions approached the Textile Labour Association (TLA) started by Mahatma Gandhi in 1917. The women had started earning small incomes working as casual labourers, pulling carts, and carrying headloads of cloth in the wholesale textile markets of the city. They were soon directed to the TLA's women's wing, where Ela Bhatt, a trained lawyer, used to represent the union in court disputes. She was also engaged in policy discussions with the state government and the ministry of labour (Blaxall, 2004). Bhatt conceived the idea of organising these women and others who worked in the informal sectors, like vegetable vendors, used garment sellers, construction workers, and carpenters, into a union, christened the Self-Employed Women's Association, SEWA (Blaxall, 2004).

SEWA was launched in 1972 as an association with the TLA. The organisation focused mainly on poor women and believed their empowerment could only be achieved by two primary factors: secure employment and self-reliance. As a membership-based organisation with an avowed espousal of Gandhian principles and democratic procedures, their activities empower poor women working in the informal sector (Blaxall, 2004). The organisation emerged and evolved in direct response to the needs of its members from rural and urban areas. It embarked upon the journey with the thinking that the growth, development, and empowerment of poor women occurs when they have income and food security, are healthy, and have access to childcare and improved housing. As a result, SEWA works to create full employment, increase income, improve food and nutrition security, enable access to affordable health services and childcare, improve housing, increase assets, strengthen worker's organisation through leadership, build self-reliance both individually and collectively, and increase the literacy of poor women. Members, rather than staff, do most of the work. It has a decentralised decision-making structure, with an evolved internal communication and coordination mechanism. The internal dynamism of SEWA derives from its *aagewan* (organisers), each of whom represents and serves a group of about 20 women. They form teams and take up responsibilities for carrying out and developing specific programmes in specific locations (De Luca et al., 2013). The organisation is based on certain values that elicit a sense of strong loyalty from its staff and members.

The initial challenges that it faced involved encouraging its rural women members to speak for themselves and overcome hurdles faced within their families. The policy environment, too, was not conducive since there was hostility to the principles of NGOs, unions, and the idea of women's empowerment. SEWA had to struggle for the initial two years before it was registered as a union. There were questions concerning the financial viability of the enterprises. It was during the caste-based violence in Gujarat in 1981 that SEWA dissociated itself from the TLA. The latter disapproved of SEWA's allegiance to the Dalits, whose houses were attacked during the violence. The TLA's neutral stance over the issue and the difference of opinions led SEWA to move away from a traditional trade union setup and diversify into a different organisational structure, comprising cooperatives, self-help groups (SHGs), and membership-based organisations.

The structure has evolved, giving the organisation the flexibility to grow and to respond to members' needs. It conducts formal elections every three years and makes governance arrangements accordingly. There are three main ways in which members are engaged (Blaxall, 2004):

i) Union (urban and rural branches): it helps in the collective struggles for fair treatment and access to justice, the markets, and other services
ii) Cooperatives: members are supported to produce, market the products, and build assets

iii) Member services: these are financed partly by user charges, partly by donors and the respective government departments responsible for the implementation of such services

The organisation symbolises these activities and interactions with the image of a banyan tree. SEWA forms the central trunk that draws its strength from the grassroots. The branches cater to the needs of poor women in various trades by providing the service they need. Each branch then lets down roots that connect it to the soil, nurturing and sustaining the branch, at the same time, strengthening the whole tree (Blaxall, 2007). Each of these affiliated organisations work in the same decentralised way. This approach is due to the different technical and specialist support services that each of the affiliates require. SEWA uses the funds generated through annual fees from members, while collecting additional fees for the social security services it offers to members. It has also formed many enterprises and companies to sustain itself (SEWA, 2020).

Role in Managing Disasters

SEWA does not work in the core disaster relief phase or carry out immediate response, but it intervenes in the post-disaster scenario to ensure livelihood generation for widows and a better life for children. SEWA's response to riots and disasters has been to provide women with livelihood options and, thereby, reduce their vulnerabilities. In pursuance of this, it has worked with women and their families affected by disasters like earthquakes, tsunamis, cyclones, riots, internal strife, and conflict. It has also been providing training to women across the Indian subcontinent. These programmes are still running in partnership with local government authorities, providing livelihood options and training for widows and women affected by conflicts, riots, and disasters in Afghanistan, Myanmar, and Sri Lanka. SEWA took up the task and succeeded in taking care of widows and orphans post the 2002 riots in Gujarat through programmes such as *Shanta* (calm) and *Hamare Bache* (our children). These programmes also helped develop links with the government and between its different branches involved in the programme.

The funds allocated for disaster-related activities are not used for other activities. In fact, SEWA has gone through its fair share of controversies, when it faced charges alleging the misappropriation of funds following the Gujarat earthquake rehabilitation projects. It succeeded in winning the case but ended its partnership in over 20 developmental projects with the state of Gujarat. In 2006–08, SEWA was invited by the Government of India to set up a training centre in Afghanistan. The project was initiated with the training of 35 Afghan women as master trainers in Gujarat. The Afghanistan government appointed SEWA to prepare a report on facilitating microfinance, product development, and ways of creating markets, and educating women on quality control, innovative design, and value addition. The centre was formally set up as the *Bagh-e-Zenana* vocational training centre. These women are largely war widows, while orphans and the destitute comprised the rest of the trainees. Most of them were illiterate, possessed no special skills, and had

never contributed to their family incomes before. SEWA's focus was to provide skill training and facilitate self-sufficiency in livelihoods by encouraging trainees to form groups.

Changing Context

Over the several decades of its existence, SEWA has consistently engaged in its principal activity of organising women towards achieving collective strength, bargaining power, and enhanced productivity. The strategy adopted is of struggle and development, which is operationalised through the collaborative actions of its trade union and cooperatives. It has now emerged as the largest primary union in India. It is rooted in the notion of community mobilisation, ensuring self-employment and self-reliance for women. The social cohesion among SEWA's members is very strong in Gujarat. This is not just due to poor women getting together but also due to the emergence of a new spirit amongst the poor and marginalised sections. Diversity has been a challenge in the organisation. However, with their decentralised associations that are well-positioned to promote organising at the local level, it has specific teams to carry out all its activities. It engages with private partners in other states and is supported by several state governments. Instead of launching similar overlapping projects, it develops linkages with macro level and existing government schemes and programmes, and aims its interventions to strengthen and improve existing government programmes in the regions it works in. However, as the organisation grows, it faces multiple challenges, of which financial viability continues to be a major challenge given the neoliberal governance regime. Even though a lot of financial demands are met by foreign donors and private funding agencies, the changing funding context in the country does not offer a long-term solution.

Area Networking and Development Initiatives (ANANDI)

Emergence

Gujarat has a large rural and tribal population. The tribal regions in the state are economically, ecologically, socially, and politically vulnerable. The most backward areas (including the districts of Kutch, Morbi, Dahod, and Bhavnagar) are also the ones that are most affected during natural and man-made disasters. In 1995, five women, namely Jahnvi Andharia, Sejal Dand, Neeta Hardikar, Preeti Sheth, and Sumitra Thacker, started an organisation to define alternatives to address rural poverty from a woman-focused approach. ANANDI was, thus, born and began work with the marginalised and poor in Gujarat's remote villages. Their work was largely in the eastern tribal belt of Panchmahal, Dahod, and Saurashtra in Western Gujarat. The vision of the organisation is centred on creating women's leadership at the grassroots and enabling them to weave their issues into development processes. Since its inception, ANANDI has worked with over 10,000 rural poor women, forming women collectives to change the nature and direction of the systemic drivers leading to their marginalisation. The field-level interventions have

seven main components, namely: community organising, sustainable livelihoods, child rights, feminist application to knowledge building, community health programmes, ensuring of safety and security of women, and strengthening of gender-sensitive governance. ANANDI believes that the process of the empowerment of poor and marginalised women forms the building block in the long-term task of change in the status of women that includes justice and social security entitlements. The major task that the organisation has undertaken has been to nurture women leaders at the grassroots level, build their capacities by respecting their traditional knowledge, utilise their skills, and substantiate this to negotiate space for them while understanding the local issues (UNDP, 2008).

ANANDI initiated its engagement with the community through its training programme with elected women sarpanches and gram panchayat members. The training programmes were focused on leadership for governance and sensitisation of women leaders to take up the issues of Dalit and other marginalised communities, aimed at strengthening the gram sabha (village assembly). ANANDI has organised several campaigns at the block and district levels, leveraging local government, officials, and prominent speakers as also targeting the general community.

Through a process of group formation and mobilisation of women's groups (mahila mandals) on the one hand and training in grassroots democracy (elected women sarpanches) on the other, ANANDI provides space for women to enhance their ability to intervene in complex political processes. Some of the significant groups formed by ANANDI include Devgadh Mahila Sangathan, Panam Mahila Bachat Ane Dhiran Mandali, Ratanmahal Adivasi Mahila Sajeev Khet Utpadak Mandal, Maliya Mahila Shakti Sangathan, and Azad Mahila Machimaari Mandali. ANANDI encouraged these groups to approach other voluntary organisations that had a mandate of cleaning wells during droughts and in times of drinking water scarcity. Some of the women showed remarkable skills in site selection, parity, and honesty in taking decisions with regard to work selection, monitoring of water, quality of work, as well as equal access to the new water resources. Initiatives like this gradually picked up and enabled the emergence of tribal women's federations that have played an increasingly important role in the struggle to claim their rights. It encouraged alliance building and grassroots mobilisation of women, and enhanced their ability to intervene in the larger complex social space in the Indian scenario. ANANDI has also sought to initiate alternate actions in the form of ensuring entitlements to the lowest strata of population from the public distribution system, forming seed and grain banks, releasing mortgaged lands, providing training in agriculture and horticulture, and engaging in campaigns like the right to food and right to forests.

Over the years, there have been interventions in varied sectors (ANANDI, n.d.):

i) Community organising: accessing entitlements for all vulnerable groups and individuals, ensuring the safety and security of women and young girls, and building local women's leadership for collective action;
ii) Sustainable livelihoods: ensuring food security by supporting organic fertiliser production and prawn harvesting, introducing certified seeds production by small farmers for food security, protecting forest rights and land rights, and providing vocational training for young girls;

iii) Child rights: engaging women's groups to address child rights, child labour, and the right to education for the migrant families engaged in cotton cultivation;
iv) Feminist application to knowledge building: advocacy and research on mainstreaming women's concern in the campaign for food security at the state, national, and international levels; and collective action for changes in policy and gender training in rural population;
v) Community health programmes: building community awareness on malnutrition, developing community-based strategies to deal with food and nutritional issues among children and maternal deaths, facilitating immunisation for mothers and children, and providing crisis support for severely malnourished children and women suffering from acute anaemia;
vi) Ensuring safety and security of women: creating an awareness campaign on laws and rights for women, supporting alternative dispute resolution mechanisms, working with college youth for promoting a safe and secure environment, promoting the formation of committees to address sexual harassment in colleges and educational institutions, and providing counselling and legal support for the same; and,
vii) Strengthening gender-sensitive governance: working with elected women representatives and women leaders to strengthen panchayats, conducting campaigns for the right to food and work, and ensuring entitlements on social security.

For an organisation rooted in a region facing widespread poverty and illiteracy, it is a major challenge to establish a decentralised grassroots structure for action at the community level. While the organisation provides the overall structure to evolve leadership at multiple levels, its foundation is still based in the cluster and village samitis and mahila mandals. This brings about an unequal structure in the holistic development of the organisation. Holistically, designing livelihood interventions to be able to move from one need to the next, including provisioning for the availability of work to assure wages and enhancing access to and developing resources so that long-term solutions are strengthened, was a continuous challenge. The major challenge that ANANDI faces is to establish and sustain its work for the well-being of their communities, channel the success through these processes and practices to regional and macro levels, and integrate them with government policies.

Role in Disaster Management

ANANDI garnered appreciation for its intervention during the 2001 earthquake relief work, wherein it was actively involved in the response, relief, and rehabilitation phases. It provided shelters and addressed malnutrition and the need for a better life for the earthquake-affected women. Even during the floods of 2016 in parts of rural Morbi district, it was involved in the response and relief activities. The strategies adopted by ANANDI primarily focus on generating general awareness on issues, such as people's rights and women's issues. As programmes address

a general audience and not a targeted group, the effectiveness of such awareness programmes is often questioned.

ANANDI, through one of its bodies, the Devgadh Mahila Sangathan (DMS), demonstrated a drought-proofing programme in a few villages. The women-led programme focused on food and fodder security through soil and water conservation works instead of traditional drought relief works, such as road or building works. Mahila mandals undertook initiatives to enhance land productivity by engaging in mapping, participatory rural appraisal exercises, analysis of topography, soil erosion, and water flow patterns. ANANDI has also executed interventions under central government-sponsored schemes, such as labour-focused soil and water conservation work, under the food for work programme, namely the Sampoorna Grameen Rojgar Yojana. Along with the DMS, ANANDI has trained women leaders as eco-workers for monitoring and ensuring works on private lands owned by marginal farmers and single women-headed households. The DMS imparted traditional knowledge on selecting sites, mobilising labourers, and monitoring work while ANANDI provided technical and administrative support. The mahila mandals at the village level and the groups at the cluster level collectively started to take up small issues, like access to drinking water in remote hamlets (ANANDI, n.d.).

Changing Context

Over several decades, ANANDI has shown that several complexities and factors influence a woman's means of living. These include access to livelihood resources, right to good health and healthcare, a violence-free home and community, understanding and control over their resources, power to make decisions, and mobility and access to education. Gender mainstreaming has been embedded in the structure of the organisation's framework and has informed ANANDI's engagement with the community and the state. The key to bringing about people-centred change has been the use of strategies built on people's knowledge, enabling them to develop skills and alternatives to be able to find solutions and give direction to the government's schemes and programmes, rather than just being passive observers. However, the engendering process requires a sustainable approach towards gender-friendly development practices at the regional as well as at the macro level, a major challenge that faces ANANDI.

With one generation of leadership structure moving away from its leadership roles, the organisation is looking to a newer generation with fresh ideas and methodologies to sustain its work, diversify, and upscale its activities to encompass larger distances and more people. ANANDI uses the DMS as an instrument to build its own political identity by merging it with gram sabhas and gram panchayats. Unlike that of SEWA, ANANDI's work is largely based in Gujarat. However, the nature of the programme changes per the evolving needs and policy environment in order to advocate the needs of the most marginalised sections of society through a gender-friendly approach.

Discussion

Emergence of Grassroots Representation, Claims-Making and Leadership among the Most Marginalised

The four civil society initiatives summarised in this chapter emerged from the everyday experiences of structural inequalities of different marginalised groups. However, as recognised by van Wessel et al. (2019), the engagement of these marginalised communities in the initiation of these initiatives vary. In VMV and SEWA, the marginalised groups were directly involved in the inception of the initiatives, with the support of other key stakeholders in the given context. However, both the YMA and ANANDI were started by outsiders, who recognised the structural inequalities encountered by marginalised groups in a particular context. The YMA was initiated by Christian missionaries to complement the activities of the church and reach out to those youth that were detached from church activities. The church approached them with an appeal for self-help and the upliftment of communities at the periphery, where the presence of formal institutions was hardly felt. ANANDI, in contrast, was begun by women who were not insiders but identified with the issues of women from marginalised communities at the periphery. Thus, the recognition of such socio-structural and geographical inequalities of landlessness, informal sector work, caste, gender, ethnicity, and remoteness of locations played a key role in the beginning of these initiatives.

The leaders, whether from within or outside the marginalised communities, framed the narrative for collective action in terms of the everyday experiences of structural inequalities experienced by the communities. As identified by Butler (2016), the forms of agency possible within a constrained context, structured by the years of historical oppression and social norms that precede, were very limited. Therefore, leaders often had to start with the conscientisation of the members since the consequences of historical oppression were quite deep-rooted and constrained the recognition of the root causes of inequalities, even among the very marginalised groups. Moreover, the resistance from mainstream and informal institutions, emerging from within the very homes and communities of the marginalised groups, proved to be all the more challenging in initiating and sustaining collective action. However, the actions emanating from these values, visions, and purposes were structured differently by the historical and changing contextual realities in each of these geographies. The Gandhian ideology in both SEWA and VMV; the traditional Mizo ethics, kinship, and altruism in the YMA; and justice, equality, freedom, and fraternity in the case of ANANDI are the varied articulations of the core values of each initiative, shaped by the context and differently internalised by the initiators. The context is not just an antecedent, mediating, or moderating variable, rather it is an ambience that leads to the shaping of the dynamic personae of the initiative as a whole (Uhl-Bien et al., 2007).

The differently articulated core values, vision, and purpose were also reflected in the nature of activities and representation pursued by each of the initiatives. As

we saw, the four initiatives display four different approaches to addressing structural inequalities experienced by different marginalised groups across geographies. Though the core values and approach remained intact over the years, the activities evolved to accommodate the changes in the context and the needs of the marginalised groups. The initial activities ranged from individual acts of writing letters to that of forming unions, voluntary association, SHGs, collectives, and cooperatives. These actions gradually evolved to address the needs of increasing members and their diverse needs, with new strategies of raising resources, capacity building, building partnerships, and utilising networks. The common role of civil society organisations identified by the World Economic Forum (WEF, 2013) is that of a watchdog, advocate, service provider, capacity builder, incubator, representative, citizen champion, solidarity supporter, and definer of standards.

An analysis of the primary roles of the four initiatives against these nine categories delineates the YMA from the other three with regard to roles such as watchdog, advocate, solidarity supporter, and citizen champion. Though the YMA was conceived as an association representing the marginalised ethnic group of the Mizo tribe, their role and activities are in line with the neutral framework of citizen engagement and solidarity, rather than that of a watchdog or advocate of social justice. SEWA, too, stands out from the other three initiatives as a definer of standards at the national level due to their engagement with global civil society and the state for bringing about policy changes to benefit the larger informal sector workforce beyond their own members. The other three initiatives, however, are primarily focused on advocating the issues of their members and meeting their emerging needs. With regard to service provision, SEWA, ANANDI, and the YMA would be distinguished from the VMV, as the latter is primarily focused on advocating the needs of the most marginalised and promoting transparency and accountability among public sector actors, and does not provide any direct services.

The services provided by SEWA and the YMA differ significantly from that of ANANDI with regard to dependence on external funding and the extent of self-help activities pursued. As ANANDI depends on externally funded projects, the services extended are limited to capacity building and expert inputs, along with occasional project-based funding for specific activities of SHGs and collectives formed among the marginalised sections of the community. Dependence on external funds hampers the provision of sustained services, and most SHGs have not evolved beyond savings and microenterprises. SEWA, in contrast, uses the self-organisation approach to be able to provide services to their members, which are not extended by the state, like childcare services, health services, and insurance services. However, their initiatives to counter the hegemony and exploitation of the market through producer companies and collectives often were not fully sustainable and required external project-based funding, which affected the autonomy and sustenance of the particular initiative. The YMA, however, is purely managed through internal funds and voluntarism, which is extended to build civic infrastructure and support services to the neediest within their members. Thus,

the services are largely humanitarian or charity oriented, unlike the rights-based perspective of SEWA.

All four initiatives emphasise decentralised grassroots-level leadership, confederated to form higher levels of leadership and administration. As all four initiatives are based on voluntary membership and collective action, the nature of leadership is unique and different from leadership within a typical CSO with hierarchical structures and paid staff. Unlike the state and market, civil society functions within a network comprising various other stakeholders. Hence, leadership involves establishing and maintaining relationships, along with the core function of upholding the values and purpose of the organisation and working collectively for a goal with the other stakeholders. Multiple contradictory interests are likely to emerge in the process of this form of collective working, and leadership plays a critical role in ensuring that the core values, vision, and purpose of the collective are not compromised.

These grassroots initiatives, however, also create space for the plurivocity of interests to coexist and work together by bringing together autonomous entities with their unique purposes intact under one umbrella, without compromising on the larger value of social justice. Since these civil society initiatives work within a complex adaptive system, a command-and-control approach would not result in the fruition of the desired goal. It needs to create conditions conducive to civic and institutional engagement and instil a sense of ownership among other stakeholders. For the organisations covered in the study, the leadership encapsulated maintaining and strengthening their organisation's identity in an environment, which, if not hostile, was not conducive enough. Apart from upholding the values and identity of the organisation, the leaders also shouldered administrative, adaptive, and enabling functions, primarily as volunteers. The administrative aspects include managerial activities, such as organising the movement and mobilising the communities in the VMV, managing to form a union and increasing the membership in SEWA, establishing a decentralised grassroots structure in a society with significant structural inequalities for ANANDI, and providing administrative support for the wide range of activities carried out by different branches of the YMA. The adaptive and enabling functions of leadership in all these organisations emerge from the various stakeholders they engage with. These are those individuals primarily external to the group, who wanted to achieve a collective goal for the communities at risk. This form of engagement involved learnings emerging from the work with specific communities and the specific risks and issues to redesign interventions to meet these specific requirements.

Apart from the communities, the other stakeholders include government and private donors and partners. The organisations have the expertise to manage such interactions; for example, Ela Bhatt, who is a trained lawyer and represented SEWA members in courts. As for ANANDI, other than the feminist leaders of the organisations, it trained women leaders in local governance to manage their activities through local government. The VMV worked with Pankaj and the network of activists working with him, who had been involved in several other movements,

were aware of the nitty-gritty of government functioning, and had the resources to connect the various movements. The YMA, even though an autonomous organisation, works parallelly with the government, especially during disasters, and has members from the public sector who volunteer in the organisation. Thus, the organisation did not only adapt to the interactions but also created an environment for interactions between several stakeholders.

Their sustained efforts to engage in dialogue and discussion with all stakeholders, ranging from communities to the state, enable a channelised flow of information for decision-making. Participation and decentralised leadership have been a crucial aspect of their action. Their values and cultures percolate into the people they are in a relationship with, largely the communities and the members. As Malcolm (2015) suggested, over time, in a complex adaptive system, a level of 'commonality of organisational culture' emerges in the context that comprises explicit practices, beliefs, and rituals about the 'why' and 'how' things are to be done. These commonalities hold a rich diversity of perspectives and pathways needed to adapt to the system (Malcolm, 2015).

Engagements in Context of Disasters and Linkage to the Every Day

Of the four initiatives, the VMV is the only one that emerged in response to the structural inequalities faced in the context of disasters and remains restricted to addressing the needs of marginalised communities affected by disasters through advocacy and grassroots assertions. However, it identifies the structural violence and inequalities experienced on an everyday basis as the root cause of extreme consequences in the context of disasters and attempts to address the same through advocacy. The other three organisations were primarily concerned with the everyday issues of structural inequalities, where disasters created opportunities to initiate these local CSOs into the disaster management sector. To start with, all four initiatives reached out to their members affected by disasters.

Notably, SEWA and ANANDI offered their services to the communities beyond their members, with the help of external funding (government and private) in the context of disasters in Gujarat (ANANDI) as well as beyond the boundaries of the state and country (in the case of SEWA). While operating in Gujarat, both organisations were able to largely stick to their approach of building grassroots leadership in executing the programmes that were externally funded. However, when SEWA was called upon to address the issues of disaster survivors in other states, the scope of work drastically reduced with regard to the range of cooperatives and member services offered, though they were able to retain the balance between the struggle and development strategies. When international governments partnered with SEWA, they were primarily brought in as development consultants on a two-year project to set up a vocational training centre in Afghanistan and to build the capacity of master trainers. Though SEWA enrolled union members from these project sites, the scope of the activities was largely developmental and was not primarily

owned by the marginal communities that SEWA worked for. However, SEWA's union and cooperatives, across state and national borders, in non-disaster times, were more sustainable and had a broader scope of activities that were owned by members of marginal sections. Though both organisations believed in incubating solutions that require a long payback period, such as empowering women and facilitating grassroots leadership, these outcomes were not very forthcoming in a project mode in the disaster context.

As disasters were very much part of the context in which YMA operated, disaster-related services were well institutionalised within it, leading to its own protocols, procedures, categories of disasters and loss, capacity-building initiatives, and institutional arrangements to address disasters. These disaster-specific processes and procedures, however, are well-integrated into the everyday practices of the community and, thus, give way to contextualised strategies, procedures, processes, and protocols. Recently, with the emergence of formal institutions within the state, the interface between the two has brought about areas of complementarity and contradictions. As YMA's disaster engagement has a much longer history than that of the modern institutions set up in the recent past; it can adhere to its approach and strategies while working with external stakeholders. When approached by the state and other stakeholders for partnership, it follows processes of due diligence to ensure that its core values and vision are not compromised.

The change in nature and scope of services provided by CSOs in the context of disasters confirms the trend noticed in the literature about the predominance of professional organisations and technical services, replacing the contribution of civil society. The analysis reiterates the significance of local organisations and their contextualised practices emerging from an in-depth understanding of the region and its issues. Though the contribution of local CSOs is recognised in disaster literature, it does not distinguish the nuances involved in the representation, claims-making, and leadership by marginalised groups from that of being represented by CSOs. Direct representation of the voices of marginalised groups is a rare phenomenon, especially in the context of disasters, and such representation needs to be distinguished from that of the CSOs taking on the role of observers, grassroots, technical and knowledge brokers, facilitators, sensitisers, and advisors (van Wessel et al., 2019).

Though the initiatives to elicit direct engagement of the most marginalised are time-consuming, they bring about change which further has positive ripple effects contributing to the building of disaster resilience in the long run. The difficult task of building the capacity and leadership of the most marginalised is achieved through the engagement of prospective or new members in the activities of the organisation. The empowering experiences emerging out of these engagements further motivates and elicits ownership among the most marginalised sections. ANANDI primarily relied on externally funded projects to initiate such activities that enabled women to use their agency. However, SEWA attracted membership through their member services that were largely missing from those offered by the state or market. This, in turn, led to opportunities for sensitisation, conscientisation, and

collective action. However, the project mode of operations hampered the formation of such ripple effects and the delivery of long-term paybacks. Thus, the issue, in the context of disasters, is primarily not with that of the capacity and approach of the CSOs but with that of the constrained disaster setting and institutional framework that emerges from a very event-centric perspective.

Changing Nature of Civil Society Relationship with State and Market

The relationship of each of the four initiatives with the state could be broadly distinguished using Chowdhury's (2018) three categories: collaboration, confrontation, and disconnect. The VMV movement can be regarded as confrontationist, for its objective was to gain access to government land for rehabilitation, compensation, and other development entitlements for the most marginalised sections among the communities displaced by disaster. Their mode of operation was to channelise people's pressure towards achieving accountability of government officials in realising a sustainable and enforceable solution within the legal framework from a rights-based perspective. Thus, the movement was not in conflict with the government and its policies but in pressing for state attention on the lapses in equitable implementation of the solution, especially where the most marginalised were concerned. The movement was nevertheless considered to be radical, despite their allegiance to the Gandhian principles of Satyagraha and non-violence. As a result, they were often subjected to state oppression through the use of force and precautionary arrests to thwart protest demonstrations and other strategies of assertion. The other three initiatives (YMA, SEWA, and ANANDI) were primarily meant to be autonomous, with different levels of engagement with the state at different phases in the history of the organisations. Though all three initiatives align with the self-organisational approach, SEWA and the YMA largely organise outside of the state framework, whereas ANANDI's approach aligns with self-organisation within the state framework, generally differentiated as the self-determination approach. These differences could be primarily attributed to the historical contexts shaping the initiation of each of these initiatives.

The late 1960s and 1970s (when SEWA was founded) witnessed a period of awakening of CSOs, regarding the failure of the state and the need for an alternate approach to development against a background of increasing state-imposed restrictions and regulations. Following the failure of the Janata Party to deliver, the social groups lost hope in formal political processes to bring about transformations in society, turning their attention towards grassroots mobilisation and empowerment. In the 1980s, state restrictions and regulations continued to increase in order to ensure that NGOs remained politically neutral and supported the government in its developmental work. By the 1990s, NGOs were popular development partners of the government and aid agencies, primarily influenced by global actors, like the World Bank and other bilateral and multilateral agencies. In this period, there was

also a shift in focus from income generation programmes for women towards the SHG model, which focused on savings to help members access additional credit. By the mid-1990s, women's empowerment was subscribed to by every other NGO (Kilby, 2010). ANANDI, being founded in this scenario in 1995, largely took a collaborative approach with the state and primarily worked towards fostering the reach of government services and schemes to the most vulnerable, through capacity building and empowerment initiatives. SEWA, too, adapted to these changes by working in collaboration with the government and other aid organisations. However, by the mid-1990s, the NGO effectiveness was being questioned, after the optimism of the 1980s. In the late 1990s and early 2000s, NGOs grew more vulnerable, particularly the larger ones dependent on foreign funding, as state regulations were further tightened (Kilby, 2010). In a country like India, even though the state is not entirely hostile to NGOs, associations, and movements, the policy environment and strict monitoring of foreign funding constrict the space to act independently. The changing regulations have had significant impact on grassroots work as is evident from the issues SEWA faced in the post-earthquake context. The emphasis on professional standards is prioritised over processes of grassroots representation, capacity, and leadership building among the most marginalised, especially in the context of disasters.

The YMA is predominantly autonomous. It was framed as an association to address the gap in state services in a remote location, through means of self-organisation, voluntarism, and citizen engagement and solidarity. Though it operates as an autonomous entity with no direct interface with the state and its policies, many of the YMA members are influential public-sector actors in different government departments. They even execute programmes funded by the government that align with the purpose of the organisation but are not primarily dependent on government funds and schemes for regular activities and have an alternate source of income generated through member contribution, stalls, fish ponds, and so on. As is evident, it resembles closely the Czechoslovakian conception of civil society that is "a free, informal, open community of people . . . united by the will to strive, individually and collectively, for the respect of civic and human rights in our own country and throughout the world" (Declaration of Charter 77 in January 1977). The Czechoslovakian approach advocated private retreat into the microsphere of family and friends, to an extent similar to those advocated by Gramsci and Hoare (1971) and Tocquevilles (1988), who emphasise non-economic free associations around diverse interests. On similar lines, Keane (1999) captures the Czechoslovakian thinker Václav Havel's (1979) vision of civil society as follows: "[T]he cultivation, from below and against all odds, of institutions that can develop 'the independent life of society' and thereby empower the powerless" (p. 286). However, as the association is built on communitarian ascriptive loyalties around the Mizo identity, we need to question the nature of this coming together, drawing from the concept of political society (Chatterjee, 2004) and that of Gemeinschaft differentiated from Gesellschaft (Tönnies, 1931, 1955). With the Mizo identity becoming the dominant identity of the state of Mizoram, one must engage with

questions of inclusion of other minority identities and the expansionist agenda of the association.

Though communitarian ascriptive loyalties are pertinent to the case of the VMV, one needs to differentiate between politics of positional difference (caste, gender, disability, etc.) from that of cultural difference (ethnicity, language, nationality, religion, etc.). As the YMA frames the significance of the association in terms of addressing state absence and deprivation in a geographically remote region, and not purely in terms of a societal culture based on Mizo identity, there is a need to further explore the influence of the association on personal identity and political life in the state to delineate the communitarian nature of this form of coming together and its negative implications for other minority identities (which was beyond the scope of the current research and is being suggested for future explorations). Though the political agenda of the organisation is unclear, its implication for the personal identity of its members as Mizo is pertinent as reflected in the case study.

Nature, Efficacy, and Challenges of Civil Society Contribution in Disaster Resilience

In the context of state neglect, the four initiatives have been able to contribute to the needs of the most marginalised and demonstrated different approaches. The key contributions of these organisations were building grassroots leadership and civic infrastructure, representing the concerns of the most marginalised, providing essential services unavailable to marginalised sections, and advocating for access to services and policy change. The activities of SEWA and ANANDI aimed at providing alternatives to escape the exploitation of the market by forming cooperatives and improved livelihood outcomes for the most marginalised sections. The formation of unions among informal sector workers enabled SEWA members to raise their voices against everyday exploitation by the police, employers, middlemen, and so on. The provision of services, such as insurance, childcare, health, housing, and loans, and the everyday relevance of these activities to the members' well-being primarily contributed to the sustenance and increase in membership. The initial success of VMV in claiming land and other entitlements, and the significance of these claims in the everyday lives of the most marginalised, sustained the movement. The engagement of new members in the activities of the organisation was a key strategy to generate a consciousness of oppression, which led to their complete allegiance and support to the cause. This clearly illustrates that the capacity building of the most marginalised and grassroots mobilisation of leadership is achieved through the facilitation of the members' participation in voluntary activities of mutual support (YMA), implementation of the programmes (SEWA and ANANDI), and activities of assertion organised by the movement (SEWA and VMV).

Though ANANDI and SEWA achieved considerable success in enabling grassroots participation and empowerment of women, by engaging members in the implementation of an externally funded project in a routine and non-routine disaster

context, the sole dependence on project-based external funding was becoming a barrier to the expansion of membership and its sustenance. With the increase in competition from the market, self-sustenance of cooperatives became difficult, which further increased the reliance on state and non-state actors for funds. The VMV, too, recognises the historical oppression and marginalisation encountered by its members and the resulting extreme deprivation, as a significant challenge in the process of building critical consciousness. However, the larger vision and sense of purpose provided by the grassroots assertions and collective action sustained membership in the VMV and SEWA. The sense of belonging, mutual support, and above all, the relevance of the Mizo identity sustained and expanded membership in the YMA.

The assessing of efficacy and civil society effectiveness had different meanings for organisations with diverse organisational characteristics, operating in different environments and for varied purposes (Knoke & Prensky, 1984; Cameron, 1986; Herman & Renz, 2004). Accordingly, a range of criterion were used by different scholars to address the same. The criteria used for CSOs operating from within the traditional boundaries of an organisation with hierarchical structures was differentiated from that of civic associations and social movements that have decentralised leadership structures. Even among the second category, social movement scholars were preoccupied with policy impacts, while civic association scholars were more interested in the uniquely civic criterion of organisational effectiveness in developing leaders, mobilising participants, and gaining recognition in the public arena (Andrew et al., 2010), which, in turn, strengthened democracy and civil society.

All four organisations were effective in developing grassroots leaders and the same could be attributed to the nature of direct representation of the marginalised groups that the organisations envisioned. As far as the criterion of mobilising participants is concerned, all four organisations were effective in varying degrees. ANANDI's dependence on government programmes and external funding turned out to be a significant barrier to mobilising participants as they were not sustained in the long run, whereas the Mizo identify and the liberation philosophy were more effective in mobilising and sustaining membership in the YMA, SEWA, and VMV. The four organisations had varying levels of public recognition ranging from the local to the global scale. Only SEWA had international presence in the global civil society context, with regard to its union and advocacy networks such as the StreetNet and HomeNet. The YMA had a presence in all the Northeastern states that had a Mizo population. Although ANANDI was recognised as an implementing partner by international stakeholders, the activities of ANANDI and the VMV were limited to that of the state of their origin. The core values and purpose of mobilising members and their specificity largely determines the scale of operations beyond the place of origin. All four organisations, thus, had public recognition at varying levels which was a key factor contributing to their efficacy at different levels.

Civil society initiatives do not only have to sustain solidarity within the community or groups they are working for but have also to establish and sustain

connections with other stakeholders, especially with the political community for a wider and sustainable response and 'increase the reserve of positive social capital' (Aiyede, 2017). These connections help to access resources that are beneficial not only for the organisation but also bring in collective benefits for the entire network. These benefits include knowledge creation, innovations, and financial resources (Cohen & Prusak, 2001; Lesser, 2000; Provan & Milward, 2001; Reagans & McEvily, 2003; Ahlquist & Levi, 2013). The active engagement of CSOs (including SEWA and ANANDI) in the post-2001 earthquake context led to several best practices in Gujarat involving inclusive rehabilitation and reconstruction programmes. Though the YMA works with government disaster management institutions, the benefits are primarily limited to collaboration in the given programmes and do not amount to significant collective benefit to the network. However, due to the confrontational stand taken up by the VMV, its networks have been primarily limited to other grassroots movements, CSOs, and select sympathetic public-sector functionaries. It has not made significant collective benefits to the network of stakeholders (especially the political community) in terms of generating knowledge, innovation, and financial resources.

The other related concepts commonly used to establish the effectiveness of civil society initiatives were collective efficacy (Bandura, 1986, 1997), cooperation, and collective action (Pfaff & Valdez, 2010). Recent studies also identify factors like the size of the group, shared norms, past experiences, appropriate leadership, interdependence, and identity, to be associated with the success of the initiative (Bera, 2019). As leadership has been already discussed earlier, we take forward the discussion regarding the other factors identified in the literature. Collective efficacy reflects the ability to address problems and issues together through collective action. In a sociological context, Bandura (1986) suggested that collective efficacy perceptions are "judgments about group capabilities to make decisions, to enlist supporters and resources, to devise and carry out appropriate strategies, and to withstand failures and reprisals" (p. 451). Bandura (1997) states that perceptions of collective efficacy influence the group goals, resource management, type of strategic plans to be made, perseverance during adversities, and vulnerabilities to discouragement. The higher the collective efficacy, the higher the chances of mobilising better resources, coordination, and chances to succeed and to address the challenges and setbacks. It is generated through a process that involves engagement, problem-solving, and actions of shaping lived environment, and is more than an 'operation of agency', rather it is an enabling condition for change (Shand, 2017).

The two key attributes associated with collective efficacy are social cohesion and task-oriented action (Sherrieb et al., 2010; Ansari, 2013; Sampson, 2006; Babcicky & Seebauer, 2020). Social cohesion is related to mutual trust and solidarity, more influenced by the sense of 'attachment to the community' and not as much on pre-existing social networks. The task-specific component is dependent on shared beliefs about performing particular actions or achieving particular outcomes (Babcicky & Seebauer, 2020). Social cohesion refers to the general quality of the collective while task-specific actions are context-specific and, therefore, are tailored

to the situation (Sampson, 2006). While resilience to disasters has been studied from the perspective of social capital (Cutter et al., 2003; Adger, 2003; Norris et al., 2008; Aldrich & Meyer, 2015), collective efficacy remains an unexplored arena. While social capital focuses on relationships, collective efficacy is the conversion of those relationships into actions (Sampson, 2006; Cagney & Wen, 2008; Sherrieb et al., 2010; Ansari, 2013; Babcicky & Seebauer, 2020).

Social cohesion or a sense of attachment to the community primarily emerged from the marginal identity (based on ethnicity, geographical region, caste, gender, and occupations) of the groups in all four initiatives and played a significant role in the sustenance of the initiative in the long run. Multiple identities were brought together while providing space for each to coexist autonomously in all the initiatives. In the YMA, the ethnic groups that were brought together under the Mizo national identity did not have a formal autonomous existence within the conception of the initiative. The implications of this concerning the recognition and representation of constituent ethnic groups needs to be explored further. The task-oriented actions varied from liaison, representation, and capacity building to that of voluntarism, grassroots assertion like picketing and demonstrations, and formation of collectives and SHGs, among others. The subsequent success contributed to the sense of possibility among the marginalised groups and enhanced their confidence in the initiative across all four groups.

On similar lines, Pfaff and Valdez (2010) identify collective action and cooperation for mutual benefit to be central to the function of civil society. Collective actions include doing collective decision-making, designing the rules of conduct and management, implementing the decisions, and monitoring the adherence of rules (Meinzen-Dick et al., 2004). Thaker et al. (2016), too, identify factors such as the prior experience of success; vicarious learning, namely learning from observing other groups and successfully achieving their interests; verbal persuasion by trusted and insightful people like coaches, opinion leaders, and peers; and self-efficacy affecting the judgement of competence, act as determinants of collective efficacy. The four initiatives, considered in this chapter, amply demonstrate the significance of each of the previously identified factors concerning collective efficacy. However, the direct engagement in task-oriented collective action has been a key contributor in comparison to the factors identified in the literature earlier.

Although mainstream literature captures civil society effectiveness using a range of criteria, the limited literature, in the context of disasters, primarily focuses on civil society effectiveness in relation to the state and resistance to controversial state decisions (Aldrich & Crook, 2008; Rumbach et al., 2016). A few recent studies present contrary evidence that attributes group characteristics, such as size and sociocultural differences, to civil society effectiveness (Bera, 2019; Mudliar & Koontz, 2018; Sawada et al., 2013). The studies on environmental crisis in the context of common property resources, too, are primarily preoccupied with issues of group composition and free-riders. The analysis, thus, highlights the need for widening the criteria used to assess civil society effectiveness in the context of disasters, especially in building disaster resilience. Similarly, with regard to task-oriented action,

Zaccaro et al. (1995) state that, often, the groups are formulated around a broad set of goals, and therefore, the tasks and performance of the group revolve around these goals. In the context of disasters, Babcicky and Seebauer (2020) postulate that these tasks could range from being general, like providing social support, to more specific, such as engaging in preventive or participatory actions to reduce disaster risks. While preventive tasks include doing recovery tasks, clearing the debris, or mitigating the risks, participatory tasks include involvement in decision-making together with the authorities. We see that the analysis also highlights the need for broadening the scope of task-oriented action, conceptualised in the context of disasters, related to the every day and contributing to building disaster resilience.

Conclusions

Socio-structural inequalities coupled with geographical vulnerabilities render some communities more vulnerable to disasters than others. State welfare schemes often fail to make significant improvements in the lives of these communities. Civil society provides space for a plurovicity of interests and collective action by various autonomous entities with their unique purposes to coexist without compromising on the larger value of social justice. The CSOs, civic associations, and movements contribute to building grassroots leadership, representing the needs and concerns of the most marginalised and influencing the actions of policymakers.

Disaster responses, through integrated and coordinated efforts, from state and civil society are more effective in achieving the desired goals than those performed by various agencies in silos. Thus, it would not be incorrect to regard civil society as being nested in a system of associations, actors, sectors, and discourses. The leadership aspects of civil society revolve around maintaining interdependent stakeholder relationships with communities, donors, government, and regulatory bodies while also upholding their visions and values. This is reflected in their organisational, relational, cultural, and structural dimensions that present their administrative, adaptive, and emerging functions, in the context of building resilience to disasters. The CSOs, movements, and associations studied in this chapter contributed to strengthening solidarity within the community or groups whilst also establishing and sustaining networks with other stakeholders. These interrelationships benefitted them with knowledge creation, innovations, financial resources, and achievement of a wider and sustainable response.

A few key observations that emerged out of the study of leadership behaviours of these four organisations are described thus:

i) The actions of CSOs are deeply rooted in the ideologies, values, and principles that are formulated during their inception. These values guide them towards the issues they address and the communities facing the risks emerging out of those issues. These values are also reflected in their interventions and activities, and are also instilled among the communities they work with.
ii) The approach is targeted at and focused on a certain section of the community which, in turn, has long-term impacts for wider sections of society if upscaled

or replicated. The targeted approach addresses cohesion among communities which, over time, get strengthened with every successful action. The task of building capacity and fostering grassroots leadership among the most marginalised is achieved through the engagement of prospective or new members in the activities. The empowering experiences, through such engagements, garner the trust of members of civil society as well as of other actors involved in addressing similar issues and, thus, elicit ownership among them.

iii) The recognition of issues and strengthening of the knowledge of specific risks while interacting with communities help them design interventions such as bringing about effective outcomes. To do this, the civil society builds relationships with other stakeholders. These relational functions determine whether to work in collaboration with these stakeholders, such as the state, or adopt a confrontational or disconnected approach. Thus, they act as knowledge brokers between the public and private actors and the communities, work with communities to achieve their entitlements and rights, or work with different actors collectively for the betterment of the communities.

iv) Given the changing contexts of modernity, organisations have to adapt and modify their actions to meet the changing demands. This requires continuous engagements and interactions while keeping oneself flexible to make space for accommodating changes. The flexibility, however, needs to be aligned with the values that the organisations ply with. This also requires interactions with peers and other relevant stakeholders from various sectors for an interdependent relationship without negotiating on their voices.

v) For a sustained and wider impact, direct engagement of the marginalised has positive ripple effects that contribute to building resilience. Though the initiatives to elicit the direct engagement of the most marginalised are time-consuming, they bring about change which further has positive ripple effects contributing to disaster resilience in the long run. However, with constriction of space for civil society to act independently due to changing policy and funding norms, the recent project mode operations hamper long-term paybacks. In order to sustain themselves, the organisations have to work as implementing agencies in state-led programmes that are more event centric rather than aiming for transformative changes.

vi) Lastly, for the long term, that is, for the sustainable benefits of collective action, it is essential to engage in policy advocacy. The success of the efforts needs to be disseminated to a larger audience, and continuous efforts must be undertaken to get the action streamlined into developmental policies and procedures.

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8

INSTITUTIONAL LEADERSHIP FOR DISASTER RESILIENCE

Literature and Theoretical Review

In this chapter, our focus will be on the institutional and policy frameworks within which different actors, groups, networks, and organisations operate towards building disaster resilience.

The crises created by global environmental change, the increasing problems of climate change–induced extreme events, disasters, environmental degradation, and social inequity are understood to be complex, multiscalar, and multisectoral phenomenon, involving multiple stakeholders. Institutions are recognised to be more amenable to change while addressing such complex phenomena rather than other factors that characterise the problematic human-environment interface (Hassenforder & Barone, 2019). Institutions had, therefore, been a key focus of interventions at the global scale, especially in the past three decades (Shaw et al., 2013). Policy and institutional framework in the context of disasters, especially concerning disaster risk reduction (DRR), have received special emphasis since the International Decade of Natural Disaster Reduction in the 1990s. More recently, recognising the need for comprehensive societal change, the year 2015 saw a breakthrough in the global policy arena with three major global agreements for a sustainable, prosperous, and disaster resilient society: the Sendai Framework for Disaster Risk Reduction 2015–30 (UNGA, 2015), the Sustainable Development Goals (SDGs) (UN, 2015), and the Paris Agreement on Climate Change (UNFCCC, 2015). However, these policies need to be anchored by sturdy and pertinent institutions at different levels to be efficient and lasting (McGuire & Silvia, 2010).

Countries vary with regard to the stability and soundness of their institutional foundations and each nation has specific policy traditions that give more emphasis to some policy areas over others, such as military and social welfare (DeMajo & Olsson, 2019). Such, entrenched policy domains are grounded in firm institutional substructures that take years to develop (Peters, 2011, 2016). Newer or unconventional areas of policy like that of climate change and DRR often face limitations

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due to existing institutional foundations that are either strong and inflexible or weak and unsound, which come in the way of the enforcement and implementation of formal administrative frameworks (Abers & Keck, 2013; Clarke, 1999; Levitsky & Murillo, 2009). Many countries, especially in Asia, are plagued by dysfunctional state institutions that are overshadowed by informal/parallel institutions through fraud, patronage, bureaucratic obstacles, and "grabbing" (DeMajo & Olsson, 2019, p. 247). In such contexts, policy performance is generally poor and tends to be ad hoc, reactionary, and unstable. Policy documents often tend to become "fantasy documents" (Clarke, 1999, p. 19) or "window dressing" (Levitsky & Murillo, 2009, p. 20). Such contexts prove extremely challenging for new policy areas, like DRR, which require multilevel cross-sectoral cooperation and capacity for long-term policy. Thus, it would be challenging to initiate new policies and operationalise them. This, in turn, would require new institutional structures. However, Hysing and Olsson (2017) propose to address the challenges of a weak institutional framework by focusing on practices and the entrepreneurial potential of policy actors, especially at the local level. Institutional leadership then becomes the only source of hope in the context of weak institutional framework. Though India's institutional foundation is not as bad as its counterparts in the South Asian subcontinent, new policy areas, such as climate change and DRR, do face significant challenges due to the reactionary nature of the institutional response, poor coordination and integration (Hysing & Olsson, 2017; Seidler et al., 2018).

Although the broader discourse on disaster management has significantly evolved from relief-centric approaches to that of resilience building, the institutional arrangement has been slow to change in most contexts, including India. The country's institutional framework, in the area of disaster management, dates back to the colonial period and continues to be rather reactionary in its approach notwithstanding the changes that have come about in recent decades (Seidler et al., 2018). This chapter attempts to further explore the factors, including leadership, that contribute to institutional emergence and change towards building disaster resilience. Existing literature on disaster management institutional framework is mapped along with the historical context of global and Indian disaster management institutions.

Current Understanding

In the context of the increasing frequency of disasters in the 21st century, several key actors, including global institutions, such as the United Nations General Assembly (UNGA), United Nations International Strategy for Disaster Reduction Secretariat (UNISDR), the National Science Foundation (NSF) of the United States, and the World Bank, have raised concerns regarding the inefficiency and rigidity of institutional frameworks in addressing disasters. Following the earthquakes in India and El Salvador in 2001, inappropriate and weak institutional arrangements were identified as a key deficiency in addressing these disasters (UNGA, 2001). Zimmerman and Cusker (2001) highlight that decision-making institutions have been

lagging in incorporating climate change in their policies and planning exercises despite global recognition of the issue. The centrality of institutional arrangements was emphasised by the World Bank in the context of multijurisdictional circumstances, such as disaster management (Sharafudeen, 2002). The 2001 workshop by the NSF on "Response and Opportunities for Future Research" identified institutional, multi-organisational, and organisational dimensions of institutional arrangements for disasters as a priority for the 21st century (Zimmerman & Cusker, 2001). Highlighting multiple scenarios of weak and inadequate institutional frameworks for disaster management from the global to local levels, the UNISDR emphasised the relatively neglected aspect of institutions and the need for comprehensive plans to create a new disaster management institutional framework (UNISDR, 2004).

Though research on institutional arrangements in addressing disasters has been identified as a priority since the beginning of the 21st century, not much has been achieved over the past two decades. The empirical work in the context of disasters is less, especially when compared to other emerging fields, such as climate change and environmental policy. In these emerging fields, the influence of formal and informal institutions in organisational change are explored with actors/agents as the primary unit of analysis that emphasise the internal structures and mechanisms contributing towards it (Agarwal et al., 2012; Beunen & Patterson, 2016; Peters et al., 2017; Burch, 2011; Hassenforder & Barone, 2019; Ostrom, 2005; Patterson et al., 2019; Munck af Rosenschöld et al., 2014).

A limited number of studies, focusing on disasters, tend to emphasise the role of states and existing institutional structures at the global, regional, and national levels (Handmer & Dovers, 2007; Raschky, 2007; Lin, 2015). Apart from being a much-neglected field of research, institutional arrangements for disasters are also critiqued for the science-policy gap. Though the disaster management discourse has moved beyond reactionary, relief-centric approaches to integrated disaster risk management and, of late, towards the convergence of policy arenas, institutions continue to be primarily reactionary with little coordination between agencies managing disasters, climate change, and development planning (Munck af Rosenschöld & Rozema, 2019; Seidler et al., 2018). Other concerns identified in these new policy arenas through climate change research include the following: resource struggles, national institutions' disconnect with local institutions and knowledges, restriction of grassroots actors by national institutions or governments' capability to respond well to environmental challenges, inability of national policies to address local needs and problems, obsolete or insufficient formal institutions (Anguelovski & Carmin, 2011; Juhola & Westerhoff, 2011; Storbjörk & Hedrén, 2011), mismatch between research projections or progress in the scientific realm and formal institutions' decision-making and actions, and uncertainties embodied in modelling and predictions impacting the focus of policymakers on the present rather than future vulnerabilities (Juntti et al., 2009; Lorenz et al., 2017; Næss et al., 2005). As the research literature on institutional arrangements for disaster management is limited, we draw from existing secondary literature to summarise the historical context of

global and Indian institutional arrangements for disaster management in the section that follows.

Global Institutional Arrangement for Disaster Management: Historical Context

At present, a multitude of organisations, with different backgrounds, cultures, and interests, are involved in the domain of disaster management. This domain is not considered to be only the state's responsibility and can be linked to the neoliberal idea of decentralisation (or withdrawing) of the state's function. The disaster paradigm has observed significant changes since the time when disasters were regarded as a result of God's fury. The early efforts of centralised mechanisms to deal with disaster management date back to the Cold War period when nations started developing centralised civil defence organisations. This involved a hierarchical approach of disaster management, attributed to the command-and-control model of a military system (Coppola, 2011).

A comprehensive framework for the management of disasters that holistically addressed all phases of a disaster did not emerge until the mid-20th century. It was during the era of civil defence organisations that many countries began to set up formal structures for the dissemination of early warnings, rapid rescue and response systems, and overall coordination at various levels. While these civil defence units failed to evolve into more comprehensive disaster management organisations, the legal frameworks that evolved to give structure to these units continue to be the legal foundation for our present disaster management institutional framework. In 1987, the UNGA declared the 1990s as the International Decade for Natural Disaster Reduction (IDNDR) to improve the capacities of member countries to prevent adverse impacts from natural disasters and to facilitate the use of science and technology to deal with them. Further, in 1989, the UNGA set forth the goals for IDNDR, establishing a special UN office in Geneva to coordinate the activities of the IDNDR. The participating governments were expected to formulate national disaster mitigation programmes and policies for disaster prevention and to integrate them into developmental programmes. Other activities that were envisaged during the IDNDR were as follows: participating in global joint initiatives for disaster reduction; setting up of country-level committees in cooperation with scientific, technological, and other sectors; mobilising support from all sectors; raising public awareness and preparedness; and improving easy and timely access to emergency relief services.

The Yokohama Strategy of 1994 that emerged from the world conference on natural disaster reduction in Japan highlighted the economic as well as the social aspects of disaster management. This strategy affirmed community involvement and regional and international cooperation in mitigating disaster risks. It also established the linkages between disaster prevention, mitigation, preparedness, relief, sustainable development, poverty alleviation, and environmental protection. It confirmed the integration of disaster prevention and preparedness in developmental policies

and plans at different levels, starting from the national to global scale. As the successor of the IDNDR, the UNISDR was conceived in 2000 to guide global efforts for disaster management. It aims to do the following:

> to build disaster resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, to reduce human, social, economic, and environmental losses due to natural hazards and related technological and environmental disasters.
> *(UNISDR, n.d.; Coppola, 2007, p. 9)*

The world conference on disaster management held in Hyogo, Japan, in 2005 led to the Hyogo Framework for Action 2005–15. It aimed at member countries pursuing "The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities, and countries" by 2015. (ISDR, 2005, p. 9). To achieve this, the three goals strategised by the framework focus on successful integration of disaster risk within sustainable development processes that include policy, plans, and programmes; evolve and enhance institutional mechanisms and its capability to build disaster resilience; and integrate DRR within all phases of disaster management (Coppola, 2007). The framework also identified the strengthening of early warning systems and putting to use of education and innovative knowledge as key activities in 2005–15 for building disaster resilience. The UNISDR serves as the secretariat for the International Strategy for Disaster Reduction (ISDR) system that comprises various geographical platforms for DRR; thematic platforms for specific sectoral aspects, such as water, sanitation, and hygiene (WASH), nutrition, and housing; and inter-agency group and other stakeholder networks, including academics, researchers, private sector, civil society, and NGOs (Coppola, 2007).

The Sendai Framework for Disaster Risk Reduction, SDGs, and COP 21 Paris Agreement on Climate Change offered an opportunity to strengthen the convergence across domains of DRR, sustainable development, and climate change. The Sendai Framework emphasises disaster risk management as opposed to disaster management and in all the three agreements; the desired outcome is DRR which is conceptualised "as a product of complex and interconnected social and economic processes which overlap across the agendas of the three agreements. Intrinsic to sustainable development is DRR and the building of resilience to disasters" (NDMA, 2019, p. 5).

This new form of disaster governance reduced the role of the state due to the increasing involvement of different non-state actors. Jones et al. (2015) explain that this shift gave rise to the following three dimensions of disaster management (governance): (i) the upward dimension, where state functions are distributed among international institutions and networks; (ii) the outward dimension or mainstreaming DRR into development activities, bringing in non-state actors; and (iii) the downward dimension, that involves the distribution of functions among grassroots and subnational level of governance bodies. The downward dimension, or

decentralisation, was aimed at enabling at-risk communities to prepare and roll out comprehensive disaster management plans. The frameworks and strategies defined by international organisations are endorsed and implemented by the member countries by mainstreaming them into their respective national agendas. However, mainstreaming requires financial, human, and material resources that pose challenges to the governments of the developing world. The downward dimension does not include delegation of powers or functions and so, without the power and resources, local government and communities often see disaster management as an additional burden (Jones et al., 2015).

Disaster management requires a concerted effort from various stakeholders and agencies to build the resilience of communities. Amidst a lack of coordinated efforts, organisations tend to follow the practices that are more prevalent and routinised in their mode of functioning and closely kneaded into their cultures, values, and beliefs to achieve the target of reducing the risks of disasters. These organisational practices, especially if they emerge from organisations with more authority, prevalence, or presence, are often mimicked by other similar organisations, thus, institutionalising the practices across boundaries. These organisations form a distinct identity of their own in the institutional field they operate. This corroborates to some extent what Douglas (1986) postulates about institutions in general. Institutions have also been described as those that begin as conventions that are vulnerable to defection, renegotiation, and freeriding, and to become institutionalised, the convention requires a parallel cognitive convention to sustain it (Douglas, 1986). Thus, only those conventions that "match a structure of authority or precedence" so that the "social pattern reinforces the logical patterns and gives it prominence" (p. 52) get institutionalised.

Diffusion of disaster and risk management from the global to regional and national levels has been observed to have followed Selznick's description of institutionalisation. The number of organisations for emergency and disaster relief has grown significantly across the world in the last 50 years, in the century between the emergence of the International Committee of the Red Cross in 1863 and the development of the United Nations Disaster Relief Organisation in 1971. The expansion and geographical spread of such organisations provided a medium for the diffusion of disaster risk management through "relational and cultural processes" (Hollis, 2014, p. 328). The relational diffusion is an intersubjective exchange through networks that date back to the efforts of the Disaster Relief Union of the League of Nations and International Federation of Red Cross during the late 19th and early 20th centuries (Hollis, 2014). The relational diffusion practices that reflect "a tie between individuals through a common social category that is often 'theorized': the self-conscious development and specification of abstract categories and the formulation of patterned relationships such as a chain of cause and effect" (Strang & Meyer, 1993, p. 492). This relatively new practice of diffusion began once the global forums for disaster risk management emerged that led to the emergence of goals and strategies, such as the Yokohama Strategy, Millennium Declaration, Hyogo Framework for Action, and most recently, the Sendai

Framework for Disaster Risk Reduction (Hollis, 2014). India, too, responded to the global concerns by setting up an institutional arrangement comprising disaster management cells under the Ministry of Agriculture in the 1990s, soon after the launch of the IDNDR.

Hollis (2014) argues that these global programmes function by a highly standardised set of rules, originating from a similar knowledge and value base that Meyer et al. (2009) claim "give generalised meaning to social activity and regulate it in a patterned way" (p. 85). Apart from the relational and cultural medium of the diffusion of global management programmes, another avenue is the advocacy of "rationalized arguments for producing legitimate action within Disaster Risk Management" (p. 332). This includes "connecting DRM to 'investment', 'science' and 'climate change' as unreflective and institutionalized scripts for legitimating the reason why states cooperate on regional DRM" (p. 332), disconnecting this rationalised system of thought from their functional origins (Hollis, 2014).

Institutional Arrangement for Disaster Management in India: Historical Context

Before independence, one of the first initiatives in developing an institutional mechanism for disaster management started with the formulation of a famine code by the Famine Commission in 1883 appointed by the British colonial government. Its initial focus was on food scarcity and famine, and hence, the Scarcity Relief Division within the Ministry of Agriculture was put in charge. Gradually, the same department was upgraded to the Natural Disaster Management Division under the agriculture ministry and was given the responsibility for managing the relief measures for all other natural disasters. With rapid industrialisation, the policy framework related to hazards included the implementation of safety procedures and regulatory approaches. This later led to the emergence of the National Safety Council in 1966 under the Ministry of Labour. In 1984, the Bhopal gas tragedy shifted the government's focus to a more holistic approach to the concept of disaster management and to its role during emergencies.

There were efforts by the central government to come up with legislative changes and stronger institutional mechanisms. Crisis management groups were set up at different levels, starting from the village up to the national level under the then nodal ministry that handled disaster management, the Ministry of Agriculture and Cooperation. The IDNDR prioritised the goal of reducing disaster impacts for all, especially in the context of low-and-middle-income countries. Based on this, one of the changing approaches in India was an institutional initiative to have a central sector scheme on disaster management, implemented in 1993–94, targeting the national capability to reduce adverse impacts of disasters by focusing on pre-disaster phases. After the Yokohama conference, the activities undertaken by India involved hazard mapping and vulnerability assessment, and the establishment of a National Centre for Disaster Management in New Delhi in 1995 under the Indian Institute of Public Administration, which came under the jurisdiction of the

Ministry of Agriculture and Cooperation. In 2003, with the repositioning of disaster management under the Ministry of Home Affairs, this centre, too, was renamed the National Institute of Disaster Management (NIDM). Disaster management centres were also formed in 1995 in all states with the majority of them under the aegis of state administrative institutes. Later, these centres were also brought under the control of the NIDM.

A high-powered committee (HPC), chaired by J. C. Pant, was established in 1999 to develop a comprehensive standardised national approach to disasters. The committee began by focusing on preparing disaster management plans for natural disasters. However, with time, its scope broadened to include all disasters (HPC Report, 1999). The committee studied the disaster management system globally and consulted various stakeholders, like the UN and other national and international entities working in the sector, before making recommendations to coordinate the governance system to work effectively during disasters. The HPC had hinted at drawing up a national law and the gradual establishment of national-level authorities and committees. It also stressed the culture of prevention, rather than response and relief activities during disasters.

After the 1999 Orissa Cyclone, the Orissa State Disaster Mitigation Authority (OSDMA) was registered as a non-profit and charitable autonomous entity as per the Societies Registration Act, 1860, under the revenue department. It was mandated to deliver on both risk reduction and response initiatives, following the cyclone. After the 2001 earthquake in Gujarat, the Gujarat State Disaster Management Authority (GSDMA), similar to the OSDMA, was set up. The reconstruction and rehabilitation programme implemented by the GSDMA has been acclaimed globally. The experiences of dealing with the impact of that earthquake triggered a proposal to draft the Disaster Management Bill. It remained dormant until the 2004 tsunami that hit the coastal states of India. The National Disaster Management Authority (NDMA) was then set up in 2005 by an executive order and has been responsible for developing and operationalising the institutional framework for disaster management, which involves the formulation and implementation of policy, plans, and guidelines. The NDMA has the responsibility for the allocation and monitoring of funds for various disaster management activities in the country. The Disaster Management Act was passed in 2005, demonstrating the commitment to a comprehensive approach focusing on both pre- and post-disaster measures. Later, the NDMA was constituted under Section 3(1) of the Disaster Management Act in 2006 (Gupta, 2018). The Act also led to the constitution of the National Disaster Response Force (NDRF) as a specialist, multidisciplinary, multiskilled, high-tech force that can be rolled out in any disaster context. Apart from the apex body - the NDMA, the Act also mandated the formation of the state and district disaster management authorities (SDMA and DDMA) under the leadership of the respective chief ministers and district magistrates.

Under the overall coordination vested in the Ministry of Home Affairs, the Indian institutional framework for disaster management comprises the NDMA, the Cabinet Committee on Security, the National Crisis Management Committee,

and the National Executive Committee. The Cabinet Committee on Security and the National Crisis Management Committee are the core committees responsible for taking larger decisions in the context of disasters. The NDMA is responsible for steering disaster management activities in the country by formulating and operationalising appropriate policies, plans, and guidelines, in coordination with the state and district management authorities. The National Executive Committee assists the NDMA in discharging its function, and for monitoring implementation and compliance of plans and directives. It is also responsible for coordination between relevant departments and other agencies, such as the Armed forces and the NDRF. The NDRF assists state governments and district administrations in the event of a disaster. The NIDM is responsible for building capacities by conducting training programmes and undertaking research and knowledge management. Further, the hazard-specific nodal ministries also act as lead agencies as notified by the central government in managing specific disasters (NDMA, 2019).

Theoretical Frameworks to Explore Institutional Leadership for Disaster Resilience

The usage of the word 'institution' is ubiquitous in several disciplines like political science, social science, philosophy, and geography, but arriving at a consensus on its definition is challenging (Hodgson, 2006). This ambiguity has led to multiple definitions. Some of the earlier definitions of Veblen and Commons from economics describes 'institutions' as a "special type of social structure with the potential to change agents, including changes to their purposes and preferences" (Hodgson, 2006, p. 2). According to Veblen (1899), institutions are prevalent habits of thought, characterised as a spiritual attitude or theory of life. Commons (1931) defines them as working rules describing what the individuals can, cannot, must, must not, may, and may not do. The most accepted definition of 'institutions' was provided by Douglas North in 1990, "institutions are rules of the game of a society or, more formally, are the humanly devised constraints that structure human interaction. In consequence, they structure incentives in human exchange, whether political, social, or economic" (p. 3). By "rules of the game," North (1990) refers to the constitutions, statutes, common laws, and contracts, which range from generic constitution to terms and conditions of a specific exchange.

Depending on the etymological origin, different definitions emphasise different aspects or dimensions of the concept. An engagement with different theoretical traditions in the study of institutions, thus, becomes inevitable. The dominant theoretical traditions in the study of institutions within political science have been broadly identified by March and Olsen (1984) as old institutionalism, behaviouralism, and neo-institutionalism. The old institutionalists took a juridical approach and primarily focused only on state established institutions, like parliaments, presidential and judicial systems, and characterised institution "as a set of formalized decisions" (Hassenforder & Barone, 2019, p. 784). Behaviouralism emerged as a reaction to old institutionalism in the 1930s in the United States. Though

behaviouralists acknowledged institutions as a valid framework, they primarily focused on acts and the interests of agents or individuals to predict behaviour. Though popular in the 1960s and 1970s, it was critiqued for the uncritical or apolitical purposes it served (McCoy & Playford, 1967), sidelining of meaning and historical context, and "hyperfactualism" (Rhodes, 2011, p. 152).

Neo-institutionalism became popular in the 1980s in reaction to behaviouralism and is a heterogenous theoretical trend (Hall & Taylor, 1996), influencing diverse fields such as political science, sociology of organisations, and economics (Goodin, 1996; Lownpes, 1996; March & Olsen, 1984, 1989; Scott, 1995; DiMaggio & Powell, 1991). Neo-institutionalists explain human behaviour and public policy through the lens of institutions. Their theory focuses on the institutional context in which behaviour is located and problematises the separate focus on just human behaviour devoid of its context. Having emerged in reaction to the literature that narrowly focused on human agency (Burch, 2011) and behaviour, neo-institutionalists problematised the reduction of social problems to the level of the individual (March & Olsen, 1984) and focused on how political institutions were organised and functioned. The early neo-institutionalism studies indicate an overarching influence of institutions on not just actions but organisations, too. The institutions constrain the organisational structures and activities and, therefore, converge their practices in a particular institutional environment. The need for legitimacy in a particular institutional environment further structures the individual's behaviour (Battilana, 2006). Neo-institutionalists see institutions as both facilitating and constraining collective action. Institutions facilitate collective action by setting the rules and codes of cooperation for the involved institutions. Similarly, by limiting choices and shaping the attitudes and behaviours of actors, they constrain collective action (Hassenforder & Barone, 2019).

DiMaggio and Powell (1991), in differentiating the old from the new institutionalism, state that in the older view institutionalisation established a unique organisational character, crystallised through the preservation of custom and precedent. Whereas, in the newer view, institutionalisation reduces variety, operating across organisations to override diversity in the local environment. The shifts have been observed in terms of the following:

> theoretical focus from object relations to cognitive theory, from cathexis to ontological anxiety, from discursive to practical reason, from internalization to imitation, from commitment to ethnomethodological trust, from sanctioning to ad hocing, from norms to scripts and schemas, from values to accounts, from consistency and integration to loose coupling, and from roles to routines
>
> *(DiMaggio & Powell, 1991, p. 63)*

Neo-institutionalism, however, is not a single school of thought. It contains different theoretical trends, such as historical, rational choice, and sociological, per the most seminal classification of neo-institutionalism (Hall & Taylor, 1996). Schmidt

(2008) adds the fourth trend of discursive institutionalism as one of the most recent schools of thought in the typology of new-institutionalism.

Historical neo-institutionalism, that emphasises macro institutions and asymmetric power relations, primarily focuses on the emergence and change in institutions by analysing their history and path-dependence phenomenon, that is, how the current happenings and behaviour of actors are influenced by the decisions of the past (North, 1990; Peters, 2005; Pierson, 1993, 2000). Though institutions are considered to be stable and lasting, the strategic behaviour of actors (Hall, 1993; Pierson, 2000; Steinmo & Thelen, 1992; Streeck & Thelen, 2005), path-dependent incremental change, and its positive feedback (Vijge, 2013), ideas (Hall, 1993; Steinmo, 2001), and policy images (Ingram & Fraser, 2006) are known to bring about institutional and policy change.

Although historical neo-institutionalism regards institutions as rules and norms, these are not considered to have an existence independent of the actors, as in the most popular perspective of rational choice neo-institutionalism. Rational choice institutionalism is based on utilitarian philosophy and regards external rules and norms that constrain the self-maximising behaviour of individuals and organisations as institutions (North, 1990; Olson, 1965; Ostrom, 1990, 1991). Institutions are rules and norms that guide actors, limit their choices, facilitate production and expression of preferences, and make behaviour predictable through incentives and sanctions (North, 1990; Ostrom, 1991; Shepsle, 1989; Tsebelis, 2002). The approach conceptualises actors to be *Homo economicus*, that is, individuals who are rational, knowledgeable, and well-informed, who maximise their interest by making choices (Green & Shapiro, 1994) and, thus, determine the sustenance and change in institutions. Institutions are likely to endure only if their sustenance cost is lesser than the benefits received by the actors, and these institutions would change only when the actors perceive that the change maximises their utility (Gorges, 2001).

Problems in the use of natural resources, such as overexploitation of water or forests, were understood as unintended outcomes of aggregated individual behaviour, necessitating institutions and policies to regulate and correct these failures (Leroy & Arts, 2006). In the arena of natural resources management and environmental governance, the rational choice of new institutionalist research primarily contributed to the Common Property Resources (CPR) school of thought, which was further popularised by the introduction of frameworks, such as the Institutional Analysis and Development Framework and the Socio-Ecological Systems Framework, by Ostrom (2011). These frameworks primarily helped to understand and facilitate the self-organising behaviour of actors and, owing to their simplicity, straightforwardness, and utility in a range of situations (Mollinga, 2001; Moore, 1990), were used extensively by international development actors globally. Though popular, the approach was critiqued heavily for being, what Cleaver (2012) terms, 'mainstream institutionalism'. The key contentions centred around the assumption about the maximisation of actors' interest while choices are made (Green & Shapiro, 1994); the conception of an ideal local community that does not account for

the parochial and political processes that shape community dynamics (Baron et al., 2011); the omission of the politics that produces knowledge (Lejano et al., 2013); the pushing aside of certain institutional actors, especially the state; and the search for universal behavioural patterns within instances of varied collective initiatives, which are not easily discerned through research (Baron et al., 2011). The theoretical trends that follow (sociological and discursive institutionalism) address these gaps by applying a broader ontological approach to institutions.

The sociological new institutionalism that draws from the knowledge base of the sociology of organisations conceptualises institutions as rules, values, routines, and symbols that structure actors' meaning-making processes, perspectives, and understanding. Emphasising the socialising elements of institutions informing individual preferences, it focuses on the cognitive and cultural aspects of institutions (Hall & Taylor, 1996). The cognitive and normative rules, either converge or diverge from everyday routines and roles (March & Olsen, 1994). Research on the emergence of this theoretical tradition focuses on identifying the cultural factors that lead to new organisational forms (DiMaggio & Powell, 1983, 1991; Rao et al., 2000) and the emergence of professionals that supports prevailing ideas (Ingram & Fraser, 2006).

The other most recent theoretical trends in the study of institutions are that of "discursive institutionalism" (Schmidt, 2008, p. 305) and "critical institutionalism" (Cleaver, 2012, p. 34). Discursive institutionalism focuses on ideas, their significance, the discursive process that constructs them, and its communication among actors (Schmidt, 2008). While there is so much attention on different dimensions of an institution, there are scholars—grouped as "critical institutionalists" by Cleaver (2012)—who question whether the idea of appropriate institutional arrangement will achieve the claims of better governance and development. They also ask whether it is possible and justified to bring about planned purposeful changes in institutions. This approach analyses institutional functioning, taking into account the dynamic nature of institutional governance and interactions among actors in the socio-hydrological systems (Cleveringa et al., 2009; Huppert, 2008). Critical institutionalists embrace the complex and plural nature of institutions and focus on the historical context, the rootedness in everyday social context, and the interface between diverse institutional arrangements, structured by the dimension of time (traditional versus modern) and legitimacy (formal and informal) (Hassenforder & Barone, 2019). Considering the relational nature of human interactions (Mosse, 1997; Roth, 2009), they focus on the issue of power dynamics, exclusion, and social justice, especially concerning participation and access to resource and benefits among the weaker sections of society (Johnson, 2004; Wong, 2009).

Since disasters are an elusive category of disruptive events, constituted by diverse social, economic, demographic, and cultural factors that often coincide with other environmental issues, the theoretical trends used to understand climate change and environmental issues are often extended to the study of disasters. Though research on the institutional arrangement for DRR and management are few, we can easily discern the influence of prominent theoretical traditions, such as that of the CPR school of thought being extended as the Integrated Disaster Risk Management

Framework proposed in recent literature. Though the CPR school of thought is popular and is projected to develop in the future in academia through the work of prominent organisations, such as the Indiana University of Bloomington, United States, and the Resilience Alliance in Europe (Thiel et al., 2015), the need to look beyond a particular theoretical trend emerges from the critical literature quoted earlier in this chapter and the need for transformative change recognised in the first introductory chapter.

Institutional Change and Emergence

The two broad perspectives that guide research on institutional change from within the neo-institutionalist frame are the structural and process approaches. The structural approach, which explores the forms or specific features of institutions, focuses either on the actors (rational choice neo-institutionalism) or the very structures of these institutions (historical neo-institutionalism). The process approach, which explores the emergence and change processes in institutions (Mohr, 1982; Scott, 2010; Stroud, 2003), focuses on the nature of change (change versus emergence), drivers of change (endogenous or exogenous drivers, ideas) (Hall, 1997), isomorphism (DiMaggio & Powell, 1991), strategies (Ostrom, 2005), and policy temporalities and change rhythm (gradual incremental change versus sudden transformative change). Hassenforder and Barone (2019) refer to modification in pre-existing arrangements as institutional change and unprecedented change as institutional emergence. Endogenous drivers encompass value base, priorities, competencies, readiness for change, and policy entrepreneurs, among others, within the institutional structure (Hassenforder & Barone, 2019). Whereas exogenous drivers in the environment include biological, physical, social, economic, political, and cultural processes, and unprecedented occurrences like disasters (Ostrom, 2005; Saleth, 2006; Stroud, 2003; Wiering & Crabbé, 2006; Young, 2010). Recent research considers exogenous social and economic drivers to be more influential than endogenous drivers (Shen & Wu, 2017).

The process-based approaches identify two distinct pathways concerning the trajectory and rhythm of institutional change: design-based intentional change versus evolutionary change. The design approach considers that "institutions are purposefully designed and implemented in a centralised way" (Kingston & Caballero, 2008, p. 2). The evolutionary approach considers that "institutional forms periodically emerge (either at random or through deliberate design) and undergo some kind of decentralised selection process as they compete against alternative institutions" (Kingston & Caballero, 2008, p. 2). Though the new institutionalist's allegiance is divided between design-based and evolutionary change approaches, there is a broader consensus about the potentiality of gradual/incremental shifts compared to sudden transformations (Gralepois et al., 2016; Mahoney & Thelen, 2010; Streeck & Thelen, 2005; Torfing, 2009). Thus, traditional approaches and the concept of path dependence are considered to be more relevant in the exploration of institutional resilience. As new institutionalists

largely conceive institutions as relatively stable structures that survive and replicate effortlessly, most of them pay attention to continuity instead of change. However, researchers like Mahoney and Thelen (2010) and Béland (2007) disagree and emphasise the need to focus more on endogenous drivers such as power, strategies, ideas, and agents' agencies.

Institutional Entrepreneurship and Leadership

Institutional changes are brought about by actors recognised as institutional entrepreneurs. This happens when they realise an opportunity to pursue the interest that they value. These actors, who are interested in a particular arrangement, raise the resources to bring about the desired transformation in an existing institution or to build new ones (DiMaggio, 1988). These entrepreneurs are either individuals, groups, organisations, or groups of organisations that come together with a particular interest (Battilana, 2006).

Institutional entrepreneurship refers to the "activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones" (Maguire et al., 2004, p. 657). Institutional entrepreneurs bring about divergent institutional changes much beyond the status quo and contribute towards institutional transformation or emergence of new institutions (Battilana & D'Aunno, 2009). They possess the capabilities for critically reflecting on current institutional processes and conceive strategies to achieve their objectives (Beckert, 1999). The basis for the same emerges from the idea presented by DiMaggio (1988) that the "new institutions arise when organized actors with sufficient resources see in them an opportunity to realize interests that they value highly" (p. 14). The actor's location in a structured system, where the manoeuvres for resources, stakes, and access are staged, and the availability of resources that permits the use of power in a given system (field) defines the individual's or organisations' interests and opportunities (Greenwood et al., 2008). In this approach, constraints, challenges, and crisis within a system (field) act as a stimulus to create a "window of opportunity" for institutional entrepreneurs to further their interest, skill sets, and know-how (Hardy & Maguire, 2017). Crisis enables the coming together of change agents or brings about a difference in the 'intellectual climate', enabling the disruption of current processes and awareness of alternatives (Greenwood et al., 2002).

The literature on institutional entrepreneurship presents two distinct narratives around it—actor-centric and process-centric. The actor-centric narrative emphasises the strategies employed by an institutional entrepreneur, while process-centric focuses on struggles and challenges associated with institutional entrepreneurship activities. Institutional entrepreneurs own the potential to reflect and develop insights to identify opportunities and bring in institutional change by strategically using their superior political or social skills to mobilise the resources, rationales, and relations in a creative way. Others play a supportive or cooperative role in this process, and struggles and conflict are often ignored. The process-centric approach

views "institutional entrepreneurship as an emergent outcome of diverse, spatially dispersed actors who face considerable difficulty in achieving effective collective action, and where gains for one group may imply significant losses for others" (Greenwood et al., 2008, p. 274). Other members are also involved in producing counter-narratives or making "discursive counter moves" (Greenwood et al., 2008, p. 212). In the event of self-defeat of, or constraint on, existing discourses, the process may lead to failure or inertia (Hardy & Maguire, 2017). Greenwood et al. (2008) argue that the peripheral actors are the locale of institutional change, as being in the periphery distances them from the norms and prescriptions of the larger institution and also exposes them to alternatives from other fields.

In the context of disasters, the scholarship addresses the role of entrepreneurial opportunities after a disaster as an organisational response (Galbraith & Stiles, 2006; Monllor & Murphy, 2017; Needleman, 2011). However, there is a dearth of literature on the processes of institutionalisation of changes and the forces enabling such changes in the context of disaster management, in organisations other than the state. The minimal reference of processes for institutional change has been discussed in the context of climate change, where Duijn and van Buuren (2017) state that institutional entrepreneurship relies on the historical reign followed by the institution. Entrepreneurship becomes more challenging within regimes that are fragmented or those that have a long historical legacy of hardwired values. The corporate climate strategies are results of various internal and external pressures that include not only current regulations and competitiveness but also the cultural and symbolic context in which the company operates. It also depends on the presence of windows of opportunity which creates a sense of urgency to implement an innovative strategy.

The analysis of case studies in the following chapter is an effort towards furthering the understanding of process-centric institutional change that may lead to the emergence of new institutions or transformation of existing ones in organisations involved in the arena of disaster resilience building.

Institutional Leadership

The role of leadership in institutionalisation, or bringing about institutional change, has been widely studied and explored. However, these studies revolve around individuals, as leaders who are responsible for bringing the change, and the characteristics of leaders and their skills. Washington et al. (2008), in their article examining Selznick's idea of institutional leadership, state that a different approach is required to understand the processes involved in the institutionalisation of practices. Furthermore, the domain of institutional leadership needs emphasis on the leadership *of* organisations rather than leadership *in* organisations (Washington et al., 2008). Kraatz and Moore (2002) identify the three roles of leadership that bring about organisational change: "knowledge transfer and inter-organisational learning" (p. 123), "introduction of new mental models and assumptions" (p. 124), and "attenuation or replacement of institutional values" (p. 124). On similar lines,

DeChurch et al. (2011), in the context of disaster response, argue for the kind of leadership that enables the organisational system to function rather than controlling individual work behaviours.

To understand the role of leadership of organisations in institutionalisation and organisational changes, we also draw from the approach that uses the multi-team system as the level of analysis. This approach enables exploration at a level of analysis beyond an individual or group, moving across the borders of different organisations but smaller than the analysis at the organisational level. One of the many reasons why this approach is considered to be a good fit for the current study is that the multi-team system deals with "non-routine, dynamic task domains, where the consequences for system failure are severe" (DeChurch et al., 2011, p. 153). However, the conception of the key features of leadership includes "a highly networked operating environment, and tasks characterized by unpredictable and rapidly changing circumstances, a high threat of loss, inadequate information, disruption of routine functioning, and reduced control" (DeChurch et al., 2011, p. 153). Thus, the suitability of this framework for the study of disaster resilience initiatives, not typically associated with an urgency to respond, must be reconsidered.

Research Focus

Similar to the first three thematic sections, here, too, we pay attention not just to the actors (institutional leaders) but to the structures of the institutions they are embedded in, and the processes of institutional change and emergence, that they influence and are influenced by. Drawing from sociological neo-institutionalism, we also focus on the way scientific and professional communities are organised and how these professionals support dominant ideas, structure the standards to be followed by practitioners, and circulate ready reckoners, guidelines, and frameworks for practice and disaster governance. Drawing from critical neo-institutionalism, we also question the role of science and technology in relation to policy and institutional change. The study of institutions differs in their key focus or unit of analysis depending on the theoretical trend that it follows. The unit of analysis ranges from formal institutions, informal institutions, the actors, the organisations, the cognitive processes, the cultural dimensions, and the very structure of institutions, among others. Drawing from the new institutionalist research on the relationship between institutions and organisations summarised later, we focus on the latter as the primary unit of analysis for the case studies presented in the following chapter. The analysis of organisations helps in understanding the institutional framework for DRR and management, and the drivers of change that have the potential to bring about transformative disaster resilience in the Indian context.

With regard to the relationship between institutions and organisations, researchers hold divergent perspectives. Evans et al. (1985) distinguish "state" as a special organisation "invested with the authority to make binding decisions for people and organizations juridically located in a particular territory and to implement these decisions using, if necessary, force" (p. 46) from other organisations, like

groups, collectives, associations, cooperatives, and corporates that come together to achieve common goals. Along similar lines, Hassenforder and Barone (2019) distinguish institutions from organisations where the latter are the "bodies of agents or groups of individuals that 'typically have personnel, offices, equipment, financial resources and often legal personality', for example, water associations, water supply companies, river basin committees, cooperatives, and water ministries or administrations" (p. 8). Institutions are "the normative and cognitive frames that actors share or follow" (Hassenforder & Barone, 2019, p. 8). Handmer and Dovers (2007) define 'organisations' as "manifestations of underlying institutions—specific departments, associations, agencies, etc." (p. 30) that are long-lived and influential to be regarded as institutions. However, they can be quickly dissolved or changed radically rather than an institution, like a government agency that manifests the traditions of a system of government but can easily be transformed—renamed, merged, and revised overnight. Researchers like Hodgson (2006) refute the distinction made between institutions and organisations and redefine 'organisations' as "special institutions that involve a) criteria to establish their boundaries and to distinguish their members from non-members, b) principles of sovereignty concerning who is in charge, and c) chains of command delineating responsibilities within the organisation" (p. 8).

North (1990) defined 'organisations' as actors, "groups of individuals bound together by some common purpose to achieve objectives" (p. 5). Since institutions are the rules of the game, the actors have been regarded as players that can be "political bodies (political parties, the Senate, a city council, a regulatory agency), economic bodies (firms, trade unions, family farms, cooperatives), social bodies (churches, clubs, athletic associations) and educational bodies (schools, universities, vocational training centres)" (North, 1990, p. 5). These organisations, North states, are agents of institutional change and provide structure to human interaction.

Institutional theory defines 'institutionalisation' as "the emergence of orderly, stable, socially integrating patterns out of unstable, loosely organised, or narrowly technical activities" (Broom & Selznick, 1955, p. 238). It identifies individual organisations as the locus of institutionalisation wherein organisations "infused with value" become ends in themselves and operate within essentially moral frames of reference (Selznick, 1957). As organisations are institutionalised, they attempt "to take on a special character and to achieve a distinctive competence or, perhaps, a trained or built-in incapacity" (Selznick, 1996, p. 271) and, thus, become the primary unit of analysis.

> It includes infusion with value beyond the technical requirement of tasks and largely depends on the readiness with which the organisation or practice is given up or transformed in response to new demands or circumstances. Nevertheless, other processes also contribute significantly towards institutionalisation, like the creation of a formal structure, the emergence of informal norms, selective recruiting, administrative rituals, ideologies, and much

> else that results from a special history of goal-seeking, problem-solving, and adaptation.
>
> *(Selznick, 1996, p. 271)*

Thus, organisations are seen as both agents of institutional change and as the primary unit that is changed and transformed in the process of institutionalisation.

Drawing from the literature and research focus earlier, the following research questions are explored in the next chapter:

i) How do institutions emerge and change in new policy arenas, such as disaster risk reduction and management?
ii) What role do actors, other than state agencies, play in institutional emergence and change?
iii) How does the change in paradigm, from relief to integrated risk management and resilience-building, get reflected beyond national-level regulatory bodies into other organisations?
iv) How do organisations contribute to institutional change?
v) What is the role of science and technology in bringing about policy and institutional change?

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9

INSTITUTIONAL LEADERSHIP FOR DISASTER RESILIENCE

Case Studies and Analysis

Research on institutional arrangements in addressing disasters has been identified as a priority since the beginning of the 21st century. However, not much has been achieved over the past two decades, and little empirical work in the context of disasters exists, especially when compared to other emerging fields, such as climate change and environmental governance. In this chapter, we shall discuss the case studies of four organisations towards exploring institutional emergence and change in new policy arenas, such as disaster risk reduction and resilience building in the Indian context. We primarily draw from the literature that presents the historical context of disaster management institutional frameworks and the theoretical literature on new institutionalism to explore factors contributing to the emergence and change in institutions towards disaster resilience.

The current literature on the institutional framework for environmental governance and climate change largely draws from the rational choice new institutionalism, that narrowly focuses on understanding and facilitating the self-maximising and organising behaviour of individual actors within the constraints of institutions. A similar trend can be seen in the limited literature in the context of disasters that conceptualises integrated disaster risk management frameworks. As this perspective is projected to become more popular in the future with the work of prominent organisations, we make a conscious effort to look beyond the individual agents' behaviour by drawing from other theoretical perspectives, like the critical, sociological, and historical new institutionalism. We also explore factors that are known to bring about institutional and policy change: as for example, history, path-dependence, incremental change and its positive feedback, strategic behaviour of actors, ideas, policy images, cognitive and cultural conditions for the emergence of institutions, and the emergence of professionals that support prevailing ideas. The critical institutionalist literature specifically brings our attention to the issues of power dynamics, exclusion, and social justice, in the context of participation

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and access to resources, as human action is considered to be highly relational. This chapter explores both exogenous and endogenous factors, including leadership, that contribute to institutional emergence and change towards building disaster resilience.

In the study of institutions, the unit of analysis ranges from formal institutions, informal institutions, actors, organisations, cognitive processes, cultural dimensions to the structure of institutions. In this thematic section, we conceptualise organisations as actors or players, who operate by the rules of the game, also known as institutions. Since organisations are conceptualised as agents of institutional change and provide structure to human interaction, they become the primary unit of analysis in this thematic section. Organisations are seen as both agents of institutional change and primary units that are changed and transformed in the process of institutionalisation. This thematic section also attempts to defocus from national-level disaster management organisations that have been the subject of the existing limited analysis. Instead, here, we focus on subnational organisations representing varied actors, including corporates (the Tata Group), regulatory agencies (the Gujarat State Disaster Management Authority), universities (the Tata Institute of Social Sciences), and scientific bodies (the Indian Meteorological Department), with regard to institutional emergence and change in the context of disasters. The sections that follow summarise the four case studies before discussing the key findings to answer the following research questions emerging from the previous chapter:

i) How do organisations contribute to institutional change?
ii) How do institutions emerge and change in new policy arenas such as disaster risk reduction and management?
iii) What is the role of science and technology in bringing about policy and institutional change?

Corporate Leadership for Disaster Resilience: The Tata Group

Traditionally, other than state agencies, civil society organisations (CSOs) and non-governmental organisations (NGOs) have been engaged in the area of disaster response and resilience, both collaboratively and individually. Private sector initiatives have always been viewed as a separate entity, until the corporate social responsibility (CSR) rules were enacted (under the Companies Act, 2013) in 2014. The corporate sector now plays an important role in providing relief and rehabilitation as well as supplying and managing human, financial, and technical resources in disaster management activities. This case study highlights the interventions and institutional changes undertaken by the Tata Group, Tata Sons, and Tata Trusts, to respond to the increasing frequency of disasters and the need for building disaster resilience.

Evolution of Tata Sons' Disaster Response Initiatives

The first Tata initiative dates back to 1934, when Tata Steel, a large steel manufacturer based in Eastern India, sent the first relief train from Jamshedpur packed with food, medical supplies, and aid to the earthquake-hit town of Munger in Northern Bihar. Within a day of arrival, the relief workers set up a temporary hospital for 400 patients. Daily, thousands were inoculated against cholera, smallpox, and tetanus. Similarly, when the cholera epidemic struck Bihar in 1950, the relief team was again despatched to provide assistance and care. After these two instances, a formal committee called the Tata Relief Committee (TRC) (West) was formed in 1967 in Mumbai. Its mission was to provide immediate relief and lasting succour to people affected by natural calamities. Soon after its inception, the TRC was actively involved in providing disaster relief and rehabilitation to different states of the country. In 1974, the Jamshedpur-based TRC (East) was set up. It was spearheaded by Tata Steel, including its sister concerns, associate companies, and industries from Jamshedpur (Tata Steel, 2009). The relief measures were funded through donations made to the TRC by various organisations, entities of the Tata Group, including employees of the Tata companies. The relief provided by the TRC are followed by rehabilitation processes, thereby, maintaining engagement with those affected long after the disaster.

As the frequency of disasters increased and their nature, too, changed, it was realised that having a single entity located in the eastern part of the country made it difficult to provide relief in a timely and efficient way to the disaster-affected in different and distant parts of the country. Further, since TRC was the only body which could incur expenses, all the money on disaster responses and rehabilitation had to be spent by it alone. Given these challenges of geographical reach and fund routing (evident in the response to the Uttarakhand disaster), it was decided to set up the Tata Sustainability Group (TSG) in 2014. One of its mandates was to coordinate the Tata Group resources in times of disaster and provide flexibility in the collaboration between various Tata companies (TSG, 2018).

Tata Sustainability Group

The TSG was a single entity, located at the headquarters, that coordinated all the Group's resources in times of need and help the various Tata companies to collaborate effectively. In the context of disasters per se, the mandate of the TSG included rescue, emergency services, relief, and rehabilitation. Moreover, it put in place three models of disaster response to be deployed as need be. The first involved providing funds to partner organisations. The second focused on leading the response by being physically present at or near the disaster-affected area. The third let a local Tata company lead the response whilst the TSG provided coordination support.

The TSG was instrumental in laying down guidelines and standard operating procedures for the Tata Group companies. They also formed and trained a cadre of managers and procurement officers to be deployed at the response site. Similarly, a framework was provided for the local companies of the group to lead responses and rehabilitate the communities around them, with TSG providing coordination support (TSG, 2018).

To further develop the disaster response framework, TSG has reorganised the group under Tata State Disaster Response Platforms and identified lead companies. The TSG also collaborated with various Tata companies to build a cadre of project managers with essential knowledge and capacities required to manage disaster response interventions in the future. In addition, a cadre of procurement officers has been identified and trained in emergency supply chain management and logistics. The TSG is also involved in training volunteers under the corporate volunteering programme. These volunteers are employees of the Group's companies. Based on their availability and their ability to commit more than seven days of work during the response period, volunteers sign up to join the Disaster Response team.

Over time, the need for an exclusive entity to handle and provide to be reconsidered response during national calamities was felt. Accordingly, a new entity named the Tata Community Initiatives Trust (TCIT) came into being in 2015. While the TSG plays the role of a think tank and execution arm sans any legal status, the TCIT is a legal entity that handles the disaster response and is the funding agency for various activities undertaken by the Tata Group. The TCIT deals with any disaster declared as a national calamity. It decides the Tata entity that will intervene in the relief phase and authorises the steering committee to make decisions, with the TSG as an executing entity.

Operationalising Disaster Response

In addition to direct implementation, the Tata Group works with several non-profit organisations, central and state governments, and government agencies for disaster response and resilience. They also partner academic institutions for technical know-how from time to time. Partnering with local non-profits is especially beneficial because of their presence among and contact with the communities, which facilitates access for the provision of relief material and rehabilitation. Further, the task of relief distribution requires a list of affected/beneficiaries, which are often provided by regional NGOs. These NGOs are shortlisted by the Tata Group, who are then required to submit a proposal stating their perspective of the rehabilitation and their strengths and weaknesses to be able to facilitate it.

Apart from CSOs, the Group collaborates with respective state governments, especially during the rehabilitation phase, and helps in the facilitation of resource delivery of hard and soft skills. There are three basic criteria put forth for the selection of implementation partners. First, the organisation should have credibility in its domain and enjoy a reputation for integrity. Second, the organisation's financial

and operational systems should be transparent. Third, the project should be compliant with the Tata Group's disaster response values (TSG, n.d.).

Even though there are several Tata entities within the Group with different mandates and skill sets, at the time of a disaster response, they act as One Tata, bringing together expertise from across companies, trusts, and NGOs. They have a large workforce across national and international boundaries coupled with an abundance of resources. The coordination of these skills and resources is handled by the TSG's Disaster Response team. This unified response to major calamities across the globe captures the essence of One Tata, backed by strong processes, projects, partnerships, and people. The learnings from their experiences across disaster relief and rehabilitation operations are used to evolve a more effective and efficient process.

Tata Trusts

Tata Trusts was set up by Jamsetji Tata in 1874 as the J. N. Tata Endowment Trust, primarily focused on providing financial assistance to Indian students for higher studies. This has metamorphosed from a charity to a philanthropic organisation and, more recently, to a direct implementing entity with an aim to build community resilience. The Tata Trusts work in all the sectors of society, including rural upliftment, education, healthcare, water, energy, urban poverty alleviation, arts, crafts and culture, institutions, innovation, and individual grants (Tata Trust, 2020).

From its inception in 1874 until 1995, the Tata Trusts functioned as a charity meant for the education and upliftment of people. In 1995, the trustees took up strategic planning with an aim to "reposition the Trust's programming efforts to focus on the contemporary needs of the Indian society" (Sir Ratan Tata Trust, 2002, p. 21). Subsequently, with the introduction of strategic planning in 2000, the organisation transformed into a philanthropic institution. As the sectors increased, the grant disbursal increased manifold. Moreover, during this period, the Trust started a strategic collaboration with non-profit organisations, government agencies, industry, and grant-making philanthropic agencies. The year 2000–01 witnessed the emergence of new programmatic partnerships. However, it is clear from the Trusts' report that the focus was mainly grant disbursal to organisations. With the passage of time, the Tata Trusts' involvement with organisations working at the grassroots started increasing, with the emergence of initiatives like Central India Initiative, Himmothan Pariyojna for the Himalayan region, and Gujarat Salinity Prevention and Mitigation Initiative. The actual implementation work was carried out by the partner organisations.

The new strategic planning (2005–06) witnessed a change in strategies with the introduction of cells, which demanded more human resources in the form of programme managers. Alongside the themes, the geographical spread of Tata's initiatives, too, visibly spread over the years, with an increasing number of collaborations and partnerships with government departments and agricultural universities. However, rural livelihood and communities remained the major thrust

area for the Trusts with maximum grants made to initiatives launched in Rajasthan, Jharkhand, Madhya Pradesh, and Gujarat, regions prone to disasters like floods and droughts. The fund disbursement was majorly in the field of natural resources management and livelihood followed by grants for education. However, the thrust of the Sir Dorabji Tata Trust towards the development of institutions remained intact over the years.

The transition in the approach and institutionalisation of technocratic and managerial practices is reflected in the Trusts' vocabulary. The grantees gradually became partners and cells transformed into initiatives, and there was a regular occurrence of words like 'innovation', 'technology', and 'standard operating procedures'. The Trusts had moved far beyond the grant-making approach to engaging directly in operations through partnerships with NGOs and government organisations. In addition, while earlier the initiatives were exclusive and focused, the Tata Trusts gradually moved into an integrated approach, whereby more than one initiative was launched in a particular region.

From Grant-Maker to Implementer

Major changes took place in the functioning of the Tata Trusts in 2012. The Trusts no longer remained only a charity or philanthropic organisation but also entered into direct implementation of the projects. The transformation began after Ratan Tata retired as the Chairman of Tata Sons in December 2012 and got deeply involved in the operations of Tata Trusts. He raised questions regarding the "strategy and long-term goals, technology and innovation, collaboration and cooperation, sustainability and scalability" (Sir Dorabji Tata Trust & The Allied Trusts, 2017, p. 4) of the projects that were funded. These questions in the form of an approach were later, called the Yellow Card Approach (for these points were jotted down by Mr Tata on a yellow piece of paper) (Sir Ratan Tata Trust & Allied Trusts, 2014). Soon, due to his intervention, an assessment of the Trusts' activities was conducted through the Bridgespan Group, an international NGO involved in the evaluation and advising of philanthropic organisations. Ratan Tata mentioned this in one of his interviews with the Bridgespan Group and Mint (2016):

> One important finding to emerge from their assignment—and this may have remained under the scanner without an outsider saying it—related to delegating authority to speed up the process of allocating resources for grant-making. Earlier, trustees sat and personally scrutinised every single grant application. That took up most of their time and, as a result, they couldn't add much value. Bridgespan suggested that we delegate up to a certain level. The trustees would be informed of all grants but wouldn't sit and sign their name on every single grant application. The trustees would perhaps not have accepted such a recommendation coming from the staff but this was by an independent organisation.

Apart from the project application and scrutinisation, the Trusts also witnessed many major changes during that period, such as amalgamation of the various trusts under its aegis and direct implementation of the projects as described in the following sections.

Organisational Reforms

In 2015, all the trusts formed within the Tata family were brought under the umbrella of Tata Trusts. Two principal trusts are operating under the Tata Trusts, Sir Dorabji Tata Trust and Allied Trusts, and Sir Ratan Tata Trust and Allied Trusts. The websites of the trusts ceased to function after 2015, and a new Tata Trusts website with information related to the two principal trusts was started.

Realising the need for getting involved in projects directly, the Trusts began implementing directly with or without partnerships with local organisations. This was said to be the result of Ratan Tata's direction towards enhancing the sustainability of the intervention, once the Trusts cease funding and upscaling the efforts to a larger mass. The other reason could be the challenges encountered during fund disbursal to NGOs and monitoring of the projects.

The Yellow Card Approach that the Trusts now follow includes five aspects called the five-point checklist of facets. These are "scale", "measurable impact", "finite exit route", "sustainability", and "adoption and contextual application of global best practices" (Sir Ratan Tata Trust & Allied Trusts, 2014, p. 5). Even though there is an emphasis on these terms, their operationalisation is yet to emerge. The programmes now run on a mission mode, that is, time-bound and focused interventions with an outright commitment of funds for clear-cut deliverables. This also includes partnerships with government organisations and other institutions, and the formation of associate organisations and Section 8 companies. Associate organisations are the cells that transformed into the initiative and now function as associate organisations.

The Trusts propose programmatic interventions that are implemented in a "mission mode—time bound and focussed" (Sir Ratan Tata Trust & Allied Trusts, 2014, p. 4). The interactions with the partner grassroots organisations, too, reveal that the partnerships last only till the programme activities are implemented and are sometimes terminated even before that. There is an emphasis on an integrated approach towards development. A review of the Trusts' annual reports spanning 2012 to 2017 reveal that of the many activities planned for implementation, including livelihood, governance, and water management, the only area that witnessed significant impacts on the ground was that pertaining to livelihood interventions. In other areas, where they had to depend on external agencies, for example, the weather-based agricultural insurance, which in itself is a complex process due to the uncertainty of weather conditions, they did not reach the intended outcome due to absence of support from the community.

Regulatory Institutions for Disaster Resilience: Gujarat State Disaster Management Authority (GSDMA)

The earthquake of 26 January 2001 (with its epicentre in the northeastern part of Bhuj district in Gujarat) was a devastating event due to its magnitude of 7.7 on the Richter scale. There was enormous damage to social and economic infrastructure, which affected both the rural and urban areas of Gujarat. Post-earthquake emergency rescue operations were initiated by the communities. The initial response from the government was slack due to the lack of accurate assessment of damage and the calamity's occurrence on a public holiday. The initial rescue was carried out by local administrations and residents rather than a skilled team (Shaw & Sinha, 2003). This led to the formation of an organisation dedicated to the coordination of the large-scale Gujarat Earthquake Rehabilitation and Reconstruction Project (GERRP).

Formation of GSDMA

The GERRP, a very comprehensive programme, involved the participation of numerous departments and agencies. Though the post-earthquake reconstruction appeared to be a daunting and challenging task, the aspect of long-term implementation and focus on the mitigation strategies of disaster management was in place. The GSDMA was established by the state government as the nodal agency with administrative and executive powers for the implementation and coordination of the rehabilitation programme.

Given the complexity of the situation and the tasks it threw up in its wake, the involvement of the highest political executive was needed in dealing with it. Thus, the governing body of the GSDMA included the chief minister as chair and senior ministers and officers as members (Mishra, 2006). The core staff consisted of seven senior officers, ten middle-level officers, five management graduates, and support staff. In addition to the existing administrative setup of various departments, there were several expert institutions and individuals. These agencies and institutions had national and international interactions to mobilise funds for rehabilitation and resettlement. These institutions and experts were also entrusted with the responsibility of ensuring optimum utilisation of the funds mobilised as either aid, assistance, grants, or loan from the government (both central and state), financial institutions, international funding agencies, and public and private trusts, among others.

The vision of the organisation was "to go beyond reconstruction and make Gujarat economically vibrant, agriculturally and industrially competitive with improved standards of living, and with a capacity to mitigate and manage future disasters" (GSDMA, 2017a). The organisation's efforts were appreciated by countries across the globe. It also contributed significantly to elevating the level of awareness of the community in the state. This also led to a change in the approach to deal with such natural disasters. Through the efforts of the Disaster Risk

Management Programme, the GSDMA initiated steps to build a culture of preparedness in the state.

The GSDMA's functions include development of policies, plans, and approaches for disaster preparedness, mobilisation of funds for rehabilitation and resettlements and ensuring of their optimum utilisation, and coordination with the implementing line departments. Right from the time of its establishment, the GSDMA has been involved in capacity building and training activities, dissemination of information, awareness generation among communities, and steps towards community preparedness. This distinguished the organisation from similar programmes elsewhere, and that took more time to implement activities (GSDMA, 2017a). To institutionalise disaster management, the Disaster Management Act and Policy were formulated, and studies on hazard, vulnerability, damage, and loss assessment were undertaken.

Policy Reforms

The Gujarat Legislative Assembly passed the Gujarat State Disaster Management Act in March 2003. The law, first of its kind enacted in the country was a comprehensive legislation derived from similar legislations in other countries, through wide consultation. It provides statutory status to the GSDMA and envisions a multihazard approach towards managing disasters in the state. Apart from this, several allied policy changes were introduced, such as revision of the Gujarat Development Control Regulation in all the municipalities and municipal corporations, and the mandatory integration of earthquake, wind, and fire codes. To undertake and overlook these aspects, the need to create a separate body with legal and regulatory framework was realised. Therefore, a draft bill titled Gujarat Professional Civil Engineer's Bill was prepared by the GSDMA, incorporating inputs from engineers' associations, practicing engineers, and other international and national technical experts. The bill envisaged constitution of a regulatory body by engineers. It was passed by the legislative assembly in March 2006 and is implemented through the Department of Roads and Bridges, Gujarat (GSDMA, 2017b).

Recognising the importance of emergency medical services during the first hour of disasters, the Gujarat Emergency Medical Services Bill, 2005, was drafted by the health department. It was passed by the legislative assembly and is now being implemented by the health department to bring down the death rate in the events of major disasters and road accidents, and to ensure an efficient emergency medical service across the state.

In 2005, on the lines of the Gujarat State Disaster Management Act, the Disaster Management Act was passed for the country and, with its mandate, provided a legal and institutional framework for "the effective management of disaster and for matters connected therewith or incidental thereto" (MHA, 2011, p. 57). It also provided an institutional mechanism at the national, state, and district levels for comprehensive disaster management with the establishment of the National

Disaster Management Authority, State Disaster Management Authorities, and District Disaster Management Authorities (MHA, 2011).

The GSDMA has played a prominent role in designing disaster policy and plans. The Gujarat State Disaster Management Policy (GSDMP) aims at "establishing necessary systems, structures, programs, resources, capabilities and guiding principles for reducing disaster risks and preparing for and responding to disasters and threats of disasters in the state of Gujarat" (GSDMP, 2002, p. 2). It identifies the key players and stakeholders and their responsibilities in disaster management. It also provides for institutional arrangements for implementing a project. Disaster management plans at state, district, block, and even village levels have also been prepared.

Organisational Reforms

The GSDMA has also contributed in improving the status of the monitoring of earthquakes in the state through the augmentation of national networks. It has set up observatories at 16 locations and accelerographs at 40 locations, on the basis of recommendations from experts from institutes, such as the Indian Meteorological Department, Gujarat Engineering Research Institute, and Indian Institute of Technology, Roorkee. With the help of the GEON Centre, Moscow, a seismological monitoring mobile unit was also set up. In 2006, the Gujarat government's Science and Technology Department established the Institute of Seismological Research (ISR) to monitor the seismic activities in the state.

Since 1996, the Natural Disaster Management cell at the Sardar Patel Institute of Public Administration, under the aegis of the Gujarat administration, had been handling natural disasters. After the Bhuj earthquake, the GSDMA decided to establish the Gujarat Institute of Disaster Management (GIDM) to address the stakeholders' capacity-building needs. The Natural Disaster Management cell was brought under the administrative control of the GSDMA in 2004, and in 2005, the erstwhile Disaster Management Cell was renamed as the GIDM. The GIDM was registered as an autonomous body under the provisions of the Societies Registration Act, 1860, in 2012 (GIDM, 2018).

Factors Influencing Institutionalisation and Evolution of the GSDMA

Right from its inception, the GSDMA has successfully implemented projects, with the GERRP being the most acclaimed and successful one. However, over the years, the nature of projects undertaken have shown minimal innovation and include more of routine tasks mandated by the Disaster Management Act. The diversity in the projects, with the objective of holistic and long-term benefits, has now been taken over by short-term projects falling under the purview of routine tasks. Some of the other limiting factors emerging from the institutionalisation of the GSDMA are discussed as follows:

The relief efforts following the devastating cyclone that hit Odisha (former Orissa) in 1999, did not witness any significant changes in the way disasters were managed institutionally at the national and state levels in India. However, the Bhuj earthquake led to the establishment and transformation of institutional mechanisms, not only in the state but also in the country at a macro level. This could be attributed to the Yokohama Strategy for a Safer World that was drafted in 1994 and Hyogo Framework for Action (2005–15), along with the role of international funding agencies, like United Nations Development Programme (UNDP), that insisted upon establishing and restructuring institutional mechanisms for the management of disasters in the state as well as country during 2001. The funding conditions laid down by the UNDP, World Bank, and Asian Development Bank made it mandatory for the Gujarat government to restructure institutional mechanisms, which, in turn, led to the development of the GIDM and ISR. The projects that the GSDMA is currently implementing involve partnerships with central government agencies or other funding agencies that restrict the institute to innovate and evolve in the arena of disaster management, either in terms of knowledge creation or innovative measures The organisation still relies on the UNDP for its mitigation activities and the National Disaster Management Authority (NDMA) for its routine activities.

Gujarat has had a history of incorporating and effectively utilising information and communication technology for disaster management. It has been involved in the creation and maintenance of a network-based database of primarily used resources that require a budget every year. Yet, the data and technology are underutilized for effective management of relief, response and emergency operations centre. This data is fetched from devices and portals that are rarely used in the regular functioning of the State Emergency Operation Center and is accessible only to government officials. On the technology front, the organisation creates a cloud of professional expertise to back up ideas of technology and most projects revolve around this, keeping out the social aspects crucial for effective disaster management activities. In terms of preparedness, it can be seen as an investment in the procurement of disaster management equipment at the district and state levels. Preparedness for emergency medical relief, however, is not integrated into any of the projects that are currently run by the authority.

The participatory, integrated, and decentralised approach adopted during the operation of the GERRP involved all stakeholders like NGOs, line departments, subject experts, and communities. The norms, participation, and networks among disaster management organisations and individuals and communities were the determinants of efficient relief and rescue in the Bhuj earthquake. The existing structure of the GSDMA does not enable NGOs and/or other individuals and communities to contribute and play a similar role in mitigation activities in the state. The UNDP-led Disaster Risk Management programme (*Aapda Mitra*, community volunteers in disaster response) provides the scope for some involvement of NGOs in mitigation efforts, but their involvement is not to the fullest potential as they are not integrated into the project.

Under the provisions of the Gujarat State Disaster Management Act, the chief executive officer (CEO) is stipulated as a member secretary and is entrusted with the overall management and implementation of projects. The CEO, along with the additional CEO, is accountable for ensuring that the GSDMA meets its objectives. The responsibilities include coordinating and monitoring the activities relating to the prevention and mitigation of disaster, rehabilitation, and reconstruction, and the implementation of disaster management plans and their updation. Thus, the performance of the organisation depends more or less on the CEO. As indicated in Figure 9.1, since its inception in 2001, the GSDMA has had seven CEOs. The tenure of some of them lasted between four and five years while others held the post for just one year. Over the years, the organisation has undertaken routine projects rather than state-specific or disaster-related initiatives. The projects that began during the tenure of one official have been taken over by succeeding ones and implemented and coordinated with little or no modifications. While some of the CEOs introduced short-term activities, others simply followed the stipulated norms, tapping the available resources and using familiar measures. It must be noted that the mainstreaming of gender in the DRR, introduced by a female CEO, does present a significant change.

The existing funding mechanism of the GSDMA depends upon state and central financing in terms of plan allocation through the National Calamity Relief Fund (NCRF). During the Bhuj earthquake, the state has provided more evidence

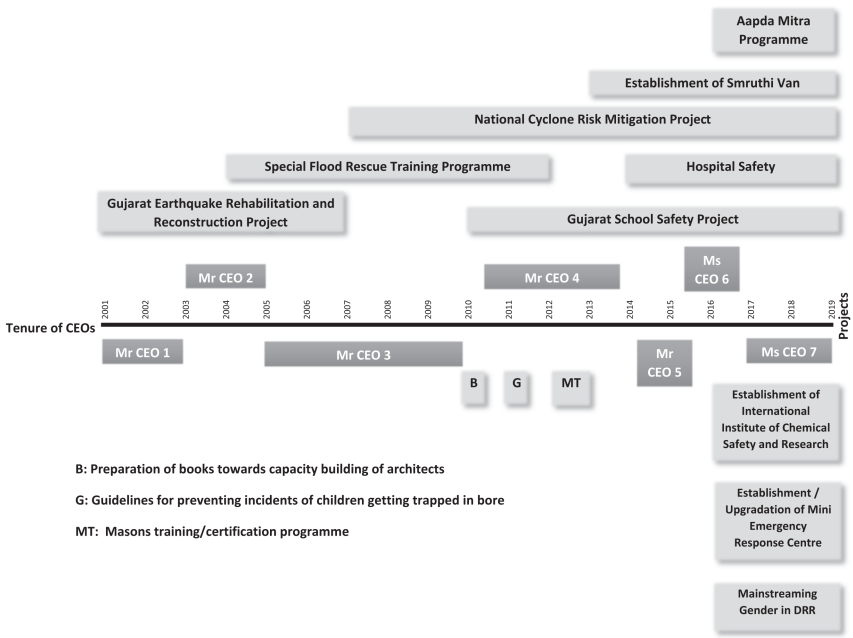


FIGURE 9.1 Tenure of CEOs of GSDMA and the Projects

of the tremendous potentials of encouraging private financing efforts during relief operations and also in post-earthquake rehabilitation and reconstruction projects. One of the most important aspects of the successful disaster financing mechanism of the state during the Bhuj earthquake was the role of NGOs in practising microfinance mechanism. Potentials of microfinance have not been adequately extended for disaster financing mechanism in the state. The existing disaster management practices and policies have inadequately addressed the potentials of the capital market mechanism. In terms of disaster insurance, existing insurance mechanism are less integrated into disaster management practices mainly due to a lower level of awareness in insurance organisations, policyholders, and vulnerable rural communities.

Scientific Institutions Leadership for Building Disaster Resilience Indian Meteorological Department (IMD)

With its 7,516-kilometre-long coastline, India is most vulnerable to stroms, compared to other countries. The early warnings systems play a significant role in cyclone disaster risk reduction and are crucial for resilience building and sustainable development. While meteorology in India dates back to the Bronze Age, as can be seen in the early philosophical writings like the Upanishads, modern meteorological observatories in the country date back to British rule. Observatory stations for studying weather and climate in India were established in Kolkata in 1785 and Chennai in 1796 by the British East India Company. Later, when a disastrous tropical cyclone hit Kolkata in 1864 followed by the failure of monsoon in 1866 and 1871, the then Government of India (GoI) established the IMD in 1875 with Kolkata as its headquarters. The purpose was to bring all meteorological work in the country under a central authority (Singh, n.d.).

For more than a century, the IMD, a principal government agency dealing with seismology, meteorology, and other allied subjects, has been providing hazard forecasts, warnings, and advisories. The following case study discusses its role in institutionalising the scientific and technological advancement in the area of cyclone management.

Cyclone Management: Then and Now

The Orissa Super Cyclone that hit the eastern coastal state of Odisha in 1999 was a catalyst in bringing a paradigm shift in cyclone management in India. Early warning systems have undergone a drastic improvement since the super cyclone. The unpreparedness and lack of technologically advanced models and systems for accurate forecasting led to a massive loss of life and property (Ramachandran, 2002). The first cyclone detection, tracking, and warning system was put up by IMD in the 1970s, but even in 1999, the improvement in the system was limited.

During the 1999 super cyclone, there was only a two-stage cyclone warning system: cyclone alert and cyclone warning. The accuracy of forecasts was low, with

errors in the prediction of landfall point being as much as 200 kilometres. The lack of coordination and communication, along with complacent worldviews in the system of managing disasters resulted in a high death toll (Ramachandran, 2002). Before 1999, there did not exist any coordination between the various government departments. The technology was poor, and there was complete dependence on the weather forecasts provided from New Delhi and Kolkata over the telephone. The communication systems for generating and disseminating effective information was underdeveloped. In the case of the super cyclone, the warnings were generated only two days before the event. This delay affected the decision-making processes of local responders (Ray-Bennett, 2016). This also had impacts on the legitimacy of the organisation and weakening of trust among people.

Embarking on Advancement

As part of DRR measures, the emphasis across the world was on improving early warning systems. In India, too, it was widely felt that the IMD needed to be modernised in order to encompass all aspects of observations and forecasting. This included the updating of observation systems, improvement of data acquisition and data assimilation from satellites in real time, dissemination to all centres, improvement in numerical models, acquisition of high-performance computers, and creation of a modern information technology environment for overlaying numerical model outputs with synoptic outlook, thus, aiding improvement in the early warning system for tropical cyclones (Krishnan et al., 2010)

In the aftermath of the Indian Ocean Tsunami in 2006, the GoI, with the World Bank's assistance, set up the National Cyclone Risk Mitigation Project. The IMD was a partner in this project for one of the components of improving the cyclone early warning system in the country. Later, in 2007, it was decided by the Ministry of Earth Sciences that the IMD should improve on its own the observational infrastructure and technical capabilities, in terms of communication, data processing and analysis, and product generation, to be at par with the best in the world. A massive improvisation and modernisation of weather forecasting systems at IMD was kick-started on a large scale (Krishnan et al., 2010).

Modernisation of Cyclone Warning System

To establish best-in-class tropical cyclone forecasting systems, the IMD began to identify best practices in the world. The United States National Hurricane Centre was selected as the benchmark for improving the standard of India's cyclone early warning system. To achieve this standard, the rate of errors in weather-related forecasts were analysed and compared with that of the world's best. The resultant roadmap, strategy, vision, and standard operating procedures brought in a paradigm shift in all aspects of forecasting in the country. Till date, the IMD has installed about 800 automatic weather stations, 1,300 automated rain gauges, and high wind speed recording anemometers in coastal areas. Also, it augmented 15 Doppler weather

radars (plus 3 of other institutions), augmented remote sensing parameters, and ensured the help of around 25 ships of the Indian National Centre for Ocean Information Services (INCOIS) for observation in the seas. These activities have resulted in the expansion of the observational network (IMD, 2021).

There has also been a shift from analogue methods to a digital forecasting system, which can synthesise all the observational information and the information derived from various numerical weather models, with the help of a decision support system (Krishnan et al., 2010). The digital model offers many advantages: reduction in human error and quicker forecast decision-making by allowing overlapping of and comparison between various types of observational products to find similarities between models. Besides, digital models provide easy access to archival data, which is necessary to understand the evolution, genesis, characteristics, and structures of various types of weather systems, and reduced analysis times. Digital platforms also help in the generation of bulletins in a graphical format that is visually appealing and easily understood, thus, enabling quick actions. The introduction of text-cum-graphic measures bulletins, from 2009, helped in better assessment of forecast warning and dissemination to multiple users in a much shorter time.

These improvements in the forecasting system help to provide advisories frequently. Now, the IMD provides updates at three-hour intervals in the case of cyclones and hourly updates on the day of the landfall of a cyclone. During tropical cyclones, it provides a forecast of expected damage based on cyclone intensity, which is forecasted from climatology information and various numerical weather prediction models. Earlier, the cyclone genesis forecast was for only 24 hours. In 2014, it was extended to three days; and from 2018, the IMD provides five days' forecast for the genesis of tropical cyclones over the Bay of Bengal and the Arabian Sea.

There is an improvement in every aspect of the early warning system of tropical cyclones, starting with observations, analysis, detection, monitoring, prediction through modelling, decision-making with a decision support system, warning presentation, generation, dissemination, and verification of previous forecasts to improve confidence in them. This has helped build public confidence and restore legitimacy.

Early Warning Dissemination

Early warning dissemination is one of the most important components of an early warning system. The IMD, after generating forecasts, uses all the latest tools and technology, such as the internet, website, e-mail, and social media, to disseminate the same. It also utilises conventional methods, like fax and phone, to disseminate warnings to state authorities and make them available to the general public. The IMD contacts the nodal persons in the state directly (by phone) to explain the current status and their prediction for the next three to five days.

The IMD's cyclone alert and cyclone warning messages are provided to All India Radio, Doordarshan, and other press agencies for broadcast at regular intervals.

Recently, under the Digital India Programme of the GoI, the IMD launched a short message service (SMS) system in which members of the public can register themselves on the Regional Specialised Meteorological Centre (RSMC) website to receive cyclone alerts (for instance, see Figure 9.2). Besides, SMSs are also sent to users registered in the Kisan portal of the Ministry of Agriculture and Farmers Welfare, and also through INCOIS, which maintains a database of the mobile numbers of fisherfolk. The warnings are also provided for display on boards installed by INCOIS along the coast for the fisher community. The IMD also has a website (operated by RSMC) specifically for updating information about tropical cyclones with regular bulletins. The IMD is one of the very few organisations in the world that has a dedicated website for tropical cyclone warning. Since 2003, it has been given the additional responsibility of Tropical Cyclone Advisory Centre to provide tropical cyclone advisories to the Asia Pacific region's Meteorological Watch Offices. The RSMC also issues tropical cyclone advisories to the WMO/ESCAP Panel countries eight times a day.

Though dissemination of early warning is the responsibility of state governments, considering the high impacts associated with tropical cyclones, the IMD maintains a redundancy arrangement in the tropical cyclone warning dissemination for the general public. However, the dissemination mechanism of state agencies and

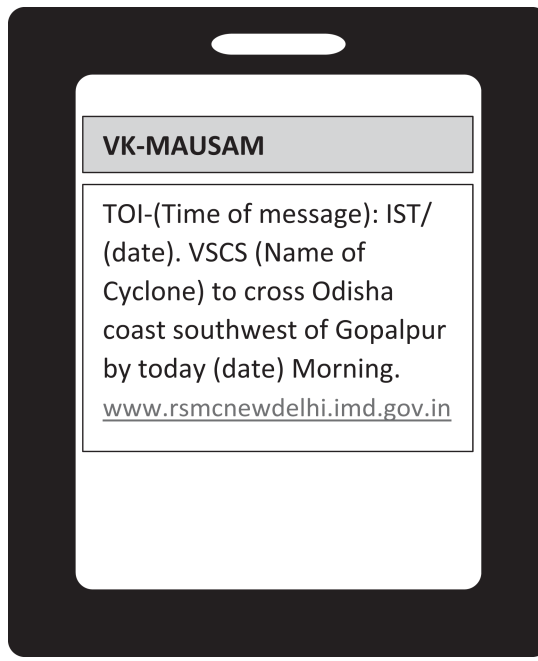


FIGURE 9.2 A Message on Cyclone Warning Disseminated by IMD to Registered Users on the RMSC

Adapted from IMD

the IMD supports the circulation of warnings only to inland public and fisherfolk close to the coast but not to fisherfolk who go out into the open sea.

In addition to the general public, there are several sectors, such as shipping, aviation, and fisheries, that get affected by cyclones and are in need of timely cyclone forecasts. The IMD caters to these needs by providing specific bulletins, such as port warning, fisheries warning, sea area bulletin, coastal weather bulletins, aviation warning, bulletins for the Indian Navy, and bulletins for departmental exchanges. Though the IMD does not ensure last-mile connectivity or provide information to different population segments (the illiterate, physically disabled, socio-economically disadvantaged, etc.), it does ensure that there is minimum redundancy in the system for cyclone early warning dissemination which runs parallel to the existing early warning dissemination mechanisms in each state by providing warnings to registered users.

Outcomes on the Ground

The improved cyclone early warning systems, together with improved awareness, has brought about a paradigm shift in disaster response and reduced the impact of cyclones. The significant outcome has been a reduction in cyclone fatalities. While the number of fatalities during the 1999 super cyclone was estimated to be 10,000, fatalities during Cyclone Phailin, which hit the same area 14 years later with wind speeds of 220 km/h, was limited to 44. The forecast for Phailin was issued five days in advance, and around one million people were evacuated from the coastal belt where the landfall was expected. Today, this action is believed to have been the largest disaster evacuation in the country. During Cyclone Hudhud, which crossed the coast of Vishakhapatnam one year later on the same date, the number of fatalities was 22, and that for Cyclone Vardah was 18. In May 2018, Cyclone Mekunu, the most intense tropical cyclone to have hit the Arabian Peninsula in the satellite era, took a death toll of around 30 in Oman and Yemen. Thus, it is evident that the cyclone early warnings have made a significant contribution to the reduction in loss of lives (PIB, 2018b). This not only reduces the agony of the families over disaster-induced fatalities but also reduces the amount of ex gratia compensation that is paid by the government. The money thus saved is available for development.

The improvements in tropical early warnings, in terms of a significant reduction in landfall point forecast error (the difference between observed and forecasted point of a cyclone landfall) and track forecast errors have helped targeted planning of evacuation of only the areas that are close to the point of cyclone landfall.

Cyclone Ockhi: Raising Questions

Cyclone Ockhi affected Tamil Nadu, Kerala, and the union territory of Lakshadweep, triggering heavy rains and high-speed winds, and causing heavy destruction on shore as well as at sea. The experience of Ockhi questioned the accuracy and

efficacy of the IMD's early warning system, and the organisation faced criticisms due to the extent of damage caused by the cyclone. Despite impressive improvements, the IMD faced the challenge of enabling its forecasts to help reduce the risks of disaster. Last-mile connectivity is one of the most significant challenges.

In the case of Ockhi, the cyclone developed close to the coast, and the intensification from deep depression into a cyclonic storm happened so rapidly that standard operating procedures of issuing early warnings could not be followed. There was a lack of awareness and limitations of state administrations in understanding the science of cyclones and the need to be prepared. Further, technological limitations prevented reaching out to fisherfolk who were already in the deep seas. The impact was particularly severe in states like Kerala where the younger generation had less awareness of cyclones, which adversely affected preparedness levels. All these contributed to the unusually severe impact of this cyclone despite the improvements in cyclone forecasting in the country. There are several other challenges in materialising the IMD's cyclone forecast into real-time actions. Though its cyclone warning dissemination systems exist in several places, they have become dormant.

Detection and forecasting of a hazard are only a small part of early warning mechanisms. Dissemination and protective actions are the most decisive elements which decide the effectiveness of the early warning mechanism in containing the risks. As evident from the failures in the case of Cyclone Ockhi to reach out to fisherfolk in time, the dissemination and protective actions aspects of the early warning mechanism still bear a question mark in India. Though the IMD has received international appreciation, national awards, and an award from the Indian Institute of Management, Raipur, for its forecasting ability and containing of losses during Cyclone Phailin (Mohapatra, n.d.), cyclone forecasting in India has also attracted criticism.

Demystifying Science for Society

There is an imperative need for cyclone advisories provided by the IMD to evolve into specifying the actions expected at a micro-scale instead of making generic suggestions. The information provided in terms of actionable warnings should be demystified for the general public. It should also not be exaggerated or underplayed. From Figure 9.2, it can be observed that while the new messaging system of the IMD provides information about a cyclone's landfall, the message gives no information on the actions expected from the public.

From the analysis of IMD bulletins, it can be seen that for Cyclone Phailin, the IMD had provided details of suggested actions in all its bulletins, such as advising against venturing out to sea; advising fisherfolk at sea to return to port; having judicious regulation of road and rail transport; totally suspending fishing activities, and rail and road transport; mobilisation for the evacuation of coastal areas; and large-scale evacuation. However, in the case of Cyclone Ockhi, the advisory suggested actions, in all the bulletins was limited to advising fisherfolk not to venture

out to sea. No other action was suggested for disaster managers or the general public. The cyclone resulted in an unexpectedly heavy loss not only of human lives but also of livestock.

Technological Advancements

The rapid intensification of Ockhi did not allow Kerala and Tamil Nadu time to take action, however, there was enough time for Lakshadweep to prepare. Though there was no loss of human life in Lakshadweep, the loss of 1,691 livestock (PIB, 2018a) posed a serious question over the actions suggested in the advisory of the IMD and the preparedness actions. If the kind of impact the cyclone had for Lakshadweep was forecasted and suitable actions had been taken, the losses could have been averted. Even data trends from Emergency Events Database on the impact of cyclones in India suggest that from 1916 to 2018, though the number of human lives lost and the number of the homeless population are decreasing over time, the number of people affected by cyclones is increasing continuously. A more robust observational network and region-specific numerical models would make the warnings from the IMD more accurate and reliable.

The current state of science and technology often fails to predict the unusual track of cyclones. These limitations, in addition to the existing challenges of cyclone management in the country, emphasise the need to review the whole cyclone management mechanism in the country and address the gaps in order to take a big leap forward in holistic cyclone management. Without this, the risk of cyclones may turn out to be even more devastating, considering that changing climatic scenarios would more so blur our understanding of cyclones.

Academic Leadership for Disaster Resilience: Tata Institute of Social Sciences (TISS)

With the onslaught of globalisation, the decline of the nation-state, increasing expansions, access and diversification of knowledge, and the growing significance of knowledge society in the 21st century, the economic value of knowledge has gained significance over its social and cultural purpose. Expectations from institutions of higher learning have changed, creating various pressures of a different sort. Universities respond to these changes and pressures by adopting different models that have implications for their goals, values, success, and sustenance. This case study captures the transition of public-funded deemed-to-be university in the developing world context, with a special focus on the process and nature of transition in one of the emerging disciplines, disaster studies.

Evolution of TISS and Its Interface with the Environment

The Sir Dorabji Tata Trust established TISS in 1936, under the name Sir Dorabji Tata Graduate School of Social Work, with 20 students. The aim was to develop

social service professionals to addresses the challenges and issues of poverty, unemployment, and distress, amidst World War II and the Great Depression. After a decade of fieldwork in the urban context and becoming a trailblazer in urban community work, academic programmes were introduced to create professionals who are relevant and competent to understand and address pressing social issues. TISS's approach to teaching, learning, and research had many similarities with the alternate progressive education thought processes of the 1920s through the 1950s and the design of curriculum integration.[1] Ideas, such as problem-based learning, curriculum integration, democratic classrooms, the core curriculum approach, among others, reflected the curriculum approach and design followed at the institution. The University–Environment Interface that enabled engagement with ground realities at various levels through fieldwork, internships, field action projects, field-based research, policy advocacy, and action, during routine and non-routine events, such as disasters and refugee crisis, set the base for interdisciplinary programmes, as social realities always challenged disciplinary boundaries in providing a holistic understanding and solution. The institute's engagement in disasters dates back to 1948, when a team of faculty members and students worked among post-partition refugee camps in the immediate aftermath of Indian Independence.

Restructuring Process and Emergence of a New Form of Disaster Studies

TISS's commitment to alternate forms of teaching, learning, and research, focusing on the social realities of the time and context, social integration, holistic learning theory, and integration of knowledge, was further strengthened by its recognition as a deemed-to-be university in 1964. This coincided with a period of significant change in universities across the globe, initiated by widespread student unrest. However, TISS already embodied the core demands of change and reform of the 1960s, like social equality, university contribution to an inclusive knowledge society, more systematic interaction with society, socially relevant research, and renewal of internal governance. In the 1970s and 1980s, in the midst of larger conservative movements, core academic values were either overturned, subdued, or co-opted across the globe. The progressive education efforts were subdued by conventional and mainstream perspectives, and got limited to few exercises. Ideas and practices, such as competency-based education, back to the basics, management by objectives, increased graduation requirements, and schemes for classical courses were popular (Beane, 1997). The version of curriculum integration during the late 20th century remained restricted to a matter of correlating skills and content from varied subject matters around a particular theme. The core of the reforms in the 1960s—democratic decision-making—was overturned in the 1990s, as they came in the way of handling the increasing fiscal crisis world over (Etzkowitz, 2001). However, in TISS, a systematic engagement with society, as part of the teaching, learning, and research, continued to be the predominant approach.

The field action projects, internship, concurrent and block fieldwork, orientation visits, field trips, and primary research were an integral component of the

curriculum, in line with the concept of curriculum integration as a curriculum design. Research units were set up to address the research needs in specific sectors in partnership with the state and other stakeholders actively engaged in the practice. This ensured the relevance of research and teaching to the current and emerging social realities. TISS also serviced the state and other stakeholder requirements in the social sector and, thus, deepened its relevance, contribution, and understanding, while adhering to its core academic values. The delayed setting in of state withdrawal from education in the Indian context, too, could be considered as an exogenous factor contributing to the difference seen at this institution (TISS, 2002). However, it remained an elite institution, in terms of the number of students enrolled every year. Though it adhered to the spirit of affirmative action, there existed an imbalance in the enrolment, considering the demand for higher education in a developing country context, to realise the aspiration of a knowledge society that is inclusive.

The second major restructuring of TISS in 2004 coincided with the phase of the university's transition to reaffirm and strengthen its social responsibilities and contribution. The restructuring process aimed at bringing about changes in the following areas: convergence of faculty strengths to generate new knowledge; removal of administrative and management bottlenecks to enhance the quality of teaching, research, and action; provision of a multilevel structure for strategic planning; and provision of additional support structures to enable faculty and students to excel, and to enhance the faculty-student relationship (TISS, 2006).

The university, established as an alternative to traditional established institutions of higher education (that focused on regional relevance and problem-based learning), had to cope with several pressures in the decades that followed, such as "changing government regulations for higher education; pressures for adapting to domestic and international academic norms and procedures; the socio-economic development in the region where the institution was located" (Huisman et al., 2002, p. 329). These demands necessitated the restructuring process characterised by a reimagining of both the academic disciplines and the governance systems. The restructuring process brought about several changes to make it possible to live in the changing environment. However, the core values and original ideas behind the establishment of the institution remained intact. The process of restructuring prioritised the further development and strengthening of existing interdisciplinary programmes as well as extending into new fields and disciplines. These new academic programmes, introduced during the institutional restructuring, were mostly borne out of the practice and contemplations in subject areas within the institution over the past six decades. The balance between regional/national versus transnational relevance and needs comprised an important consideration in the restructuring process.

As part of the restructuring process, the Jamsetji Tata Centre for Disaster Management (JTCDM), now the Jamsetji Tata School of Disaster Studies (JTSDS), was established in 2006, to consolidate the institution's six-decade-long engagement in the arena of disasters (TISS, 2006). The setting up of the new institutional form focusing on disaster studies was supported by the Tata Trust with a seed grant covering 14 academic positions and several non-academic ones. The flagship

master's programme in Disaster Management launched in 2007 was one among the first programmes introduced as part of the restructuring process.

Several key endogenous factors contributed to the shaping of the new institutional forms, such as the institutional ethos to reach out at the time of distress, and personal and professional motivations driving the engagement of academics. The call of duty, presence of expertise, and people skills became key drivers for engagement during the disasters. Disaster response engagement was also an ideal learning experience not only for the students but also for the faculty to learn from the other. Encouragement and support from institutional leadership, the willingness of the Tata Trusts and other funding organisations, and requests from the state and other stakeholders, enabled the disaster response as well as initiated the new institutional form. The needs assessment of the past and the methodological action research of the present have maintained the agenda of enhancing the reach of disaster services to the most marginalised, at the centre.

Exogenous drivers, like a transition in the context of higher education, such as the contemplations on ground realities, the social responsibilities of universities, and the gaps coupled with transitions within the institution, led to the conceptualisation of the new institutional form. Change in leadership with the new leader's orientation and interest in disaster studies facilitated the consolidation of 60 years of practice, research, teaching, and policy action in the area of disasters into its current form. Apart from this, the development in the country with regard to disaster and disaster management also encouraged restructuring. The year 2004 was also the year of the tsunami, which brought about several significant changes in the national institutional framework for addressing disasters. In 2005, the National Disaster Management Act and the NDMA came into existence. Moreover, faculty members, engaged in disaster mitigation activities, were actively engaged in preparing the disaster management guidelines, and thus, the programme to address disasters became a priority in the restructuring process.

Contribution of New Institutional Form towards Building Disaster Resilience

The JTSDS (then the JTCDM) was established to consolidate 60 years of disaster practice, research, and academic contemplation with the following vision:

> To emerge as an interdisciplinary school engaged in disaster studies offering quality educational programmes, research and extension services, that seeks to influence disaster discourse, policy and practice through critical thinking based on values of social and environmental justice and equity.
>
> *(TISS, n.d.)*

The school developed three centres for contouring the different avenues of research under disaster studies: the Centre for Disasters and Development, Centre for

Disaster Management, and Centre for Geo-informatics. These three centres have "a dynamic and iterative relationship, each leveraging the strength of the other two in a collaborative partnership" (TISS, n.d.). Thus, the school demonstrates an interdisciplinary approach in academia, research, and practice, building synergies across the natural sciences, social sciences, and humanities. Drawing from the technical fields of geology, engineering, earth sciences, hydrology, and remote sensing, among others, and bridging it with the social sciences, the school focuses on the following:

> building people-centred and participatory approaches towards disaster risk reduction and disaster response. It has carried out systematic work in areas of disaster governance, poverty and exclusion, food security, conflict, human security, public health, psychosocial care, GIS, and logistics in relation to disasters.
>
> *(TISS, n.d.)*

JTCDM (presently JTSDS) carried forward, the legacy of TISS in conceiving pioneering academic programmes in areas of national significance. Since 1983, TISS's Department of Urban and Rural Community Development (DURCD) has offered a 30-hour course on Disaster Management. It was way back in 1986 that the proposal for a Disaster Management Cell was first made to the University Grants Commission by the DURCD. It was this substantive base on which the current disaster management programmes of the JTSDS are conceived.

These range from semester-long certificate, year-long diploma courses, full-time, two-year master's degree, and MPhil and PhD programmes. The institutional commitment to disasters, demonstrated in setting up JTSDS, contributed to a consistent increase in the number of courses and candidates compared to other programmes within specific departments. The alumni occupy most of the entry-level formal and non-governmental spaces for disaster management, and many have moved to middle management positions.

Research, Documentation, and Publication

As a pioneering academic centre, the JTSDS acquired the responsibility of building and contributing to the interdisciplinary research avenue of disaster studies. Research at the JTSDS is both theoretical and applied, geared towards direct action, policy, and intervention, apart from enriching teaching. It has partnered with national and international institutes, organisations, as well as other academic bodies over the past decade, wherein its work has gained international recognition. Over the years, the JTSDS's prolific research output has attempted to complement interdisciplinary research in a wide range of areas that bridge the natural and social sciences. The research work conducted has gradually moved from exploratory studies to theoretical and methodological contributions, focusing on enhancing the

ambit of disaster studies. It highlights the transition from descriptive to more analytical and explanatory work. The school continues to strengthen its core area of study and explore different dimensions in disaster studies. The research done by faculty and students is expected to contribute to influencing policies, build theory for improving practice, and have possible applications of the knowledge gained in the long run.

Field Extension and Policy Advocacy

TISS's disaster response activities date back to 1948, when a faculty and student team were sent to Kurukshetra to work with refugees arriving from Pakistan. The JTSDS has consolidated the legacy with disaster response interventions for a range of calamities over the past decade. Over the years, the institution has worked towards experimenting and executing unique approaches to need assessments, relief management, and long-term response and recovery, and employing participatory approaches emerging from its strong social science orientation. It has supplemented its response work by producing documents and employing popular forums of media to bring attention to the challenges faced. Drawing from its disaster response experience, the JTSDS has worked extensively towards advocacy and policy formulation at different levels of governance. The school's disaster response experience has also contributed significantly to research and teaching in the field of disaster management. Meanwhile, students also enhance their skills by applying their learning in the field, creating a well-trained cadre of disaster management professionals. The frequency of extended interventions in the context of disasters has increased since the establishment of the JTSDS, ensuring continuity and interlinkages not just within the different phases of a disaster but also between disasters.

Figure 9.3 shows various disaster locations that the JTSDS has reached out to, covering all regions of the country and beyond. Several of these initial reaching-out engagements in the context of disasters have been consolidated as long-term field action projects. These projects demonstrate innovative models to address the gaps in disaster practice and also contribute to building newer areas of research and policy advocacy. It also helps build the insights and data required for policy advocacy. It is often the site for student learning and capacity building.

Discussion

This section analyses the exogeneous and endogenous factors contributing to institutional emergence and change in the field of disaster risk management, and institutional contribution towards building resilience to disasters in the India. The endogenous drivers within the institutional structure, as postulated by Hassenforder and Barone (2018), encompass "values, preferences, skills, willingness to change, facilitation, and policy entrepreneurs" (p. 11), among others. The exogenous drivers in the environment include "biophysical forces, socio-economic development, political and cultural processes, and shock events" like disasters (Hassenforder &

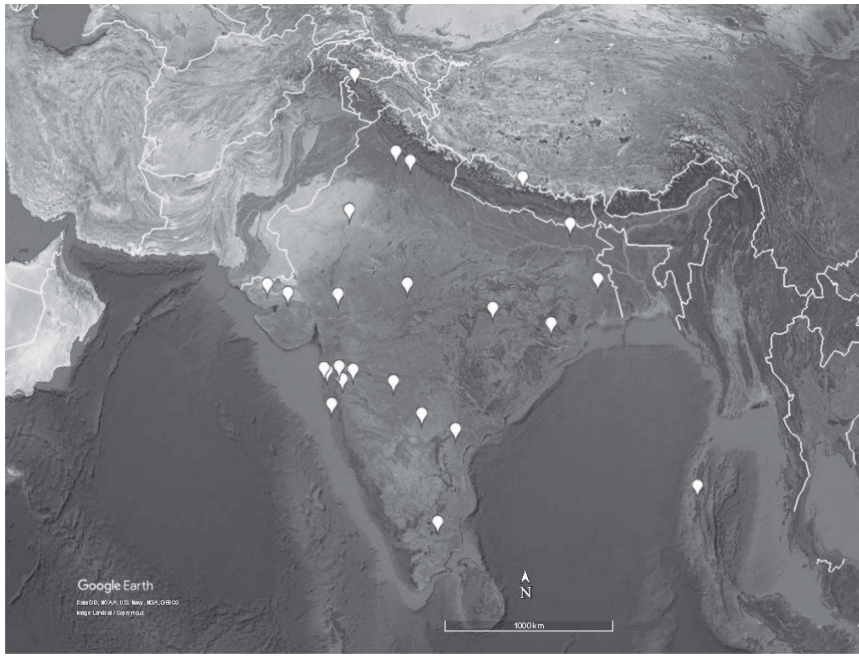


FIGURE 9.3 Disaster Interventions by JTSDS

Barone, 2018, p. 11). The influence of macro and global processes, such as globalisation, liberalisation, and risk society (Crosweller & Tschakert, 2020), in institutional emergence and change, is evident in all four case studies. The dissolution of the Soviet Union and the triumph of liberal democracies over socialism systematically turned libertarian into liberal ideas, leading to the disrepute of both socialism and the critique of capitalism. Thus, the global neoliberal governance framework that became the most popular and prominent perspective had a significant impact in the structuring of the institutional arrangement for disaster management as evident in each of the case studies.

The GSDMA was fashioned in line with the global institutional framework for disaster management, with funding and technical support from global institutions, like the World Bank and the UNDP, respectively. Similarly, the IMD had its foundations laid during the British rule through the setting up of observatories in 1785 and 1796, to study weather and climate in India by the British East India Company. Subsequently, these observatories were restructured as the IMD in 1875, following several disasters, such as the tropical cyclone that hit Kolkata in 1864 followed by the monsoon failures in 1866 and 1871. It witnessed a major facelift in 2006, post-tsunami, with regard to its technical capacities and observatory network, with funding support from the World Bank as part of the National Cyclone Risk Mitigation Project. TISS, too, went into a restructuring process in response to the growing pressures of state withdrawal, fund cuts, and privatisation, experienced by higher education institutions globally. The One Tata initiative, in the context

of disasters, too, was in response to the increasing responsibilisation of non-state entities in the wake of the neoliberal governance framework, especially with regard to CSR becoming more of a legal mandate from that of charity or humanitarian services in the context of disasters.

In all four organisations, specific disasters played a significant role in the emergence and change of institutional arrangements for disaster management. Though TISS had been making proposals for a teaching programme in disaster management since the 1980s, the increasing priority for disaster management and the increasing frequency of disasters in the 21st century facilitated it to garner financial support from the Jamsetji Tata Trust to initiate the JTCDM. Similarly, the 2001 earthquake (GSDMA), the 2004 tsunami (IMD), and the multiple disaster responses in the last decade, including the 2013 Uttarakhand floods (TISS), brought to prominence the need for consolidating past experiences, capacity building, and setting up an institutional mechanism for more coordinated and effective response. Thus, disasters became the context in which the process of institutionalisation was initiated or consolidated with greater force. Though all four organisations were involved in disaster response even before the emergence of the specific institutional arrangement under consideration (JTSDS, One Tata, IMD, and GSDMA), the processes of institutionalisation of disaster management varied from each other (despite commonalities) and were influenced by endogenous factors, such as leadership, organisational culture, and ethos, and the larger institutional framework in which each of the organisations was embedded.

In the context of climate change, van Popering-Verkerk and van Buuren (2017) postulate that the corporate climate strategies are results of various internal and external pressures that include not only the current regulations and competitiveness but also the cultural and symbolic context in which the company operates. It also depends on the presence of windows of opportunity which create a sense of urgency to implement the innovative strategy. Similarly, the need for centralisation of disaster management functions and better coordination among the varied entities involved was a key endogenous factor contributing to the emergence of new institutional arrangements in all four cases analysed. In TISS, this centralisation was more with regard to bringing together the varied disaster experiences of faculty members across schools, to inform the emerging field of disaster studies. All four organisations were influenced by international benchmarks in their initiative to build over what they already had. For example, TISS referred to the international curriculum on disaster management before developing their own. The integration of the trusts of the Tata Group and the transition from grant-makers to that of implementers followed the assessment and suggestion of the international consultants Bridgespan Group that helped it reflect on questions of strategy, technology, collaborations, sustainability, and upscalability of the projects funded and implemented. The IMD witnessed significant transitions post-2006, especially with regard to its technical capacity for cyclone early warning, and the same was fashioned in line with that of international institutions, such as the National Hurricane Centre, United States, as the benchmark. And the GERRP was restructured

as the GSDMA, in line with the global institutional arrangement for disaster management, to provide the executive and administrative authority for the coordination and implementation of the massive post-earthquake rehabilitation programme. The processes of developing standard operating procedures, protocols, codes of conduct, and cadres of trained personnel, specifically to manage disaster response initiatives, were further instrumental in the institutionalisation of disaster management processes in each of these organisations.

The broader sector in which each of them is embedded and the cultural ethos and values of each were also important factors that determined the nature of the new institutional framework that emerged and stabilised. The core cultural ethos of the Tata Group was to reach out to affected communities in one's constituency using the voluntary contribution of employees (both financial and human resources). With the establishment of the new institutional arrangement, such as that of the TSG and TCIT, past practices were formalised through professional capacity-building initiatives for employee volunteers and the formation of a legal entity (TCIT) that would facilitate the transfer of funds from within the Tata Group and from other funders. The corporate culture, too, was instrumental in structuring the various aspects of the institutional arrangement that emerged, primarily focused on enhancing visibility, scale, efficiency, coordination, and impact. In the case of TISS, the vision of addressing social and environmental justice structured the various facets of the new institutional arrangement that emerged, which was focused on addressing the knowledge and capacity gaps in the emerging discipline of disaster studies. Drawing heavily from the problem-centred curriculum approach, which TISS stood for, the new curriculum that emerged was both grounded in the grassroots realities of disaster management in India and that of the recent advances in the international realm. As the GSDMA was embedded in the realm of public administration, governance, and policy process, the institutional arrangement that emerged became highly bureaucratic, structured, and rigid with time. As long as the entity functioned within the boundaries of the GERRP and were responding to the everyday challenges of earthquake recovery and reconstruction, the institutional arrangement was proactive, flexible, and innovative in its approach. However, the change from the GERRP to GSDMA, over time, led to redundancy, as disaster risk reduction and management functions became routinised. The IMD being embedded within the realm of the public scientific institution was more internally oriented towards the scientific rigour and accuracy of prediction models. The renewed attention on cyclone prediction emerging from recurrent disasters and international assistance was fully utilised to emerge as a top-class scientific institution, and not much focus was given to information and warning dissemination, which involved interface with a wide range of stakeholders. Thus, the cultural ethos and values that guided each of these organisations structured the approach, strategy, and outcomes differently.

All four were heavily influenced by the predominant use of technology in the field of disaster management. The organisational culture and values also shaped

the way technology was put to use. For example, TISS had incorporated technology into its curriculum, whilst taking a balanced approach with regard to the integration of the social sciences with that of the natural sciences and technological aspects. However, in all the other three organisations, there was an increased emphasis on technological aspects in comparison to the social dimensions. Many of these resource-intensive technical interventions were defunct in the long run as the contextual relevance and challenges were not fully thought through. The Tata institutions' approach had shifted from that of providing grants and funds to grassroots entities to one that implemented professional services in the context of disasters, such as establishing water purification units, establishing medical camps, and rebuilding public infrastructure, where the technical dimensions were predominant and the partnership was primarily with government entities. The resource-intense interventions, such as that of the water purification entity of Tata, cyclone warning dissemination systems of the IMD, and the software applications developed, or the disaster management equipment purchased by the GSDMA, were not functional in the long run as they had become defunct due to poor maintenance or rejection by end users.

The range of stakeholders that each of these organisations engaged with, too, was influenced by the new institutional arrangements that emerged. The IMD had minimally broadened the range of stakeholders that they engaged with to integrate the new disaster management institutional arrangement that had emerged in the country post-tsunami. They also leveraged the Government of India's Digital India Programme, the Kisan Portal of the Ministry of Agriculture and Farmers Welfare, and the SMS database of fisherfolk registered with INCOIS to disseminate cyclone alerts and warnings. However, this served to reach only a small number of end users who had access to these technologies. Though the IMD witnessed significant changes with regard to its capacity and resources for cyclone prediction and dissemination and was able to significantly reduce forecast errors, there were significant institutional and technological limitations as witnessed during the Ockhi Cyclone in 2017. The IMD required continuous advancement of technology and observational networks to run region-specific numerical models. For hydro-meteorological hazards, like cyclones, there are various agencies involved in different components of the early warning system, each working with different types of observational networks (such as surface, upper air, space, land, and ocean). Reliability is high when the forecasts are based on multimodel consensus, and these models are run by different agencies within the country, within the region, and at the global level. The IMD lacked the coordinating mechanism to collaborate and cooperate with organisations, such as the International Maritime Organization and other meteorological centres, to ensure availability of and easy access to observational data.

In the Tata Group, too, the range of stakeholders engaged with had changed considerably with the emergence of new institutional arrangements for disaster management. The focus had changed from supporting grassroots initiatives to that of delivering professional services in partnership with government departments,

ministries, government financial institutions, and agricultural universities, among others, by establishing associate organisations or Section 8 Companies. As rational organisations expand their reach and dominance over different fields of social life, the organisational "structures increasingly come to reflect rules institutionalized and legitimated by and within the state" (DiMaggio & Powell, 1983, p. 150). The organisations, thus, become more homogenous with respect to given domain or fields. As stated by DiMaggio and Powell (1983), the organisations are organised increasingly around the rituals of conformity to other institutions. In the process of aligning themselves with government agencies, they become similar either due to environmental constraints or because of their ties with other organisations, which makes alteration in elements difficult without changing the interconnected elements. The GSDMA, too, went through homogenisation with the emergence of national-level institutional arrangements for disaster management and the institutionalisation of state disaster management authorities (SDMAs) across all states in India. As the NDMA and UN institutions started structuring the activities of all SDMAs through national-level projects, such as the school safety and cyclone risk reduction programme, the GSDMA gradually shifted from an integrated comprehensive approach to earthquake recovery and reconstruction to a programmatic approach that relies on the mechanisms and norms of the funding agencies. This shift had an impact on the nature of stakeholders that it interfaced with during different phases of its emergence and stabilisation.

The diffusion of a highly standardised set of rules, such as global institutional arrangements for disaster management, as claimed by Meyer et al. (2009), "give generalized meaning to social activity and regulate it in a patterned way" (p. 85). Apart from the relational and cultural medium of diffusion, the advocacy of "rationalised for legitimising the action" is another avenue. This includes connecting the management of disaster risks to science, investment, and climate change as "unreflective and institutionalized scripts" to legitimise the reasons for states to cooperate, thereby disconnecting this rationalised system of thought from their functional origins (Hollis, 2014, p. 332). The organisations respond to such forces by internalising or mimicking the norms and structures that are more prevalent and emerge from organisations with more authority (DiMaggio & Powell, 1983). Thus, it is evident that diffusion and mimetic forms of structuring, too, had contributed to isomorphism or homogenisation of institutional frameworks in new policy arenas such as disaster management. As the restructuring process, which led to the emergence of the JTSDS, brought together stakeholders from within the institute from different entities, the new institutional form could leverage the varied expertise and experiences of the multidisciplinary team. The JTSDS could also deepen its engagement with stakeholders at all levels in the context of disasters ranging from individuals, groups, and communities at risk of disasters to those at the state, national, regional, and international arena. However, with increasing specialisation, the new institutional arrangement has to guard against super specialisation taking over the plurovicity of perspectives and expertise that contributed to the emergence of a uniquely contextualised organisational form.

Each of these four organisations was a pioneer in its respective sectors and has contributed significantly to the institutionalisation of disaster management in the Indian context. The GSDMA became a prototype for several states and the national disaster management institutional framework in India. The Tata Group's framework was a prototype for corporate engagement in the context of disasters. The JTSDS was actively involved in curriculum development and capacity building for several other departments and universities in the country, and its curriculum continues to be one of the most comprehensive and balanced ones with regard to the integration of social, natural, and technical dimensions. The IMD's accurate prediction of the cyclone had ripple effects on institutional capacities to mitigate risk and response, not just within the country but at the regional and global scale, too. The analysis of the four organisations reveals how institutions often exert normative influence to encourage organisations to follow their practices and persuade other similar agencies of the merits of the frameworks and norms that they prefer (Eagleton-Pierce, 2020). In such a scenario of transition, authority and power are exercised subtly and unobtrusively through "access to channels of communication, control over discourse and vocabularies, and the ability to set agendas and shape premises" (Powell et al., 2017, p. 10).

All four organisations were simultaneously influenced by the normative pressures of professional disaster management discourses while contributing to the capacity building of professional disaster management cadre in their respective sectors. The JTSDS stood out from the other three, with regard to the way it engaged with the normative pressures of the mainstream disaster management discourse and integrated the critical discourse to customise the nature of disaster management education and interventions to suit the contextual realities in the Indian context. It also prioritised the issues and processes of social and environmental justice, over use of technology, and the discourse on efficiency, effectiveness, and outcomes, that dominated the mainstream disaster discourse. Thus, the four initiatives made varied contributions to building disaster resilience; however, they could be largely categorised as transitions rather than transformative disaster resilience, except in the case of the JTSDS. Path-dependent minimalistic change witnessed among the other three organisations does not address the factors that contribute to disaster risk to bring about transformative resilience. Thus, not all new institutional emergence and change necessarily ends up building transformative disaster resilience as demonstrated in the case studies analysed in this chapter.

Finally, the four case studies highlight the varying significance of leadership towards building disaster resilience in the Indian context. The leadership of the organisation or institutional leadership to some extent determined the nature of the institutional arrangement and its outcomes for building disaster resilience. The significance of leadership in structuring institutional emergence and change was most prominent in the case of the Tata Group and TISS, whereas the GSDMA and IMD highlighted the dominance of institutional processes over the possibilities of institutional entrepreneurship. The space for institutional entrepreneurship was more prominent in the initial phase of the emergence of the GSDMA, which reduced considerably with

the institutionalisation of the organisation. The institutional constraints of the public sector were most prominently visible in the GSDMA and IMD, providing minimal space for institutional entrepreneurship. As career bureaucrats rotated, the priority for the initiatives launched by the predecessor (often on a project mode) changed, and often, these initiatives showed little progress or were sidelined and dropped. It was very rare for the new incumbent to carry forward the project initiated by his or her predecessor with the same vigour and enthusiasm. Consequently, the implementation of several initiatives suffered since the leadership engagement was minimal in subsequent years, for most projects were rolled out as routines tasks according to stipulated norms, tapping the available resources and using familiar measures and strategies. This led to innovation and contextualisation being overlooked. However, some leaders engaged in short-term initiatives that could show results within their tenure using the space of institutional entrepreneurship. Thus, the GSDMA and IMD largely witnessed leadership in organisations and not institutional leadership as postulated by Selznick (1957, 1996). These institutional constraints within the public sector were yet another significant challenge for other organisations aligning with state institutional processes. Several of the Tata Group's initiatives with government departments and ministries did not materialise as envisioned. The change in the nature of a partnership not only deprived the civil society of key financial resources but also hampered the contribution to building disaster resilience in the long run.

Conclusions

The four case studies representing organisations embedded in varied sectors were analysed to understand the exogenous and endogenous factors, contributing to institutional emergence, and changes in the new policy arena pertaining to disaster management. The chapter also analyses the contribution of each organisation towards building transformative disaster resilience in the Indian context and the key challenges encountered. The analysis brings forth the influence of exogenous macro institutional processes on each of the organisations and the role of leadership in the customisation and contextualisation of these institutionalisation processes that largely determine its contribution to building transformative disaster resilience. The chapter identifies endogenous factors that contribute to varied outcomes in each of the organisations, such as leadership, organisational culture and ethos, and the larger institutional framework in which each of the organisations was embedded. The predominance of technological and professional interventions, institutional constraints within the government sector, and target and outcome-oriented approaches, among others, were the key challenges encountered in building transformative disaster resilience.

Note

1 Curriculum integration is a "curriculum design that is concerned with enhancing the possibilities for personal and social integration through the organization of curriculum around significant problems and issues, collaboratively identified by educators and young people, without regard for subject area boundaries" (Beane, 1997, p. 15)

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10

DISASTER RESILIENCE LEADERSHIP

The Way Forward

In recent decades, global environmental changes and problems, including disasters, environmental degradation, climate variability, and structural inequalities, have increased tremendously. The efforts to cope with the implications of such changes and to achieve sustainability require leadership practices that entail building disaster resilience while also focusing on bringing about systemic and socio-structural changes. The four thematic sections presented in this book explore these leadership practices in different spheres at various levels and contexts in India. Each of the case studies examined therein attempts to understand the context, processes, and leadership practices of individuals in power as well as those from within communities, collectives, associations, non-governmental organisations (NGOs), and special institutions, towards building resilience to disasters.

The first thematic section, Individual Leadership for Disaster Resilience, identifies individual and environmental circumstances, such as social identity, charisma, heroism, self-sacrifice, the crisis, and an idea to address the crisis, as significant factors contributing to the emergence of disaster resilience leadership. As the respective initiatives took root, the networks that leaders built along with influential members of the community, the narratives that leveraged cultural ideas, the technical strategies that addressed the crisis, and the organisational structure to enable action were developed. Important criteria for the sustainability of the outcomes were the extent to which the charisma of the founder was routinised and how the movement dynamically responded to the changing needs of the community.

The second thematic section, on Bureaucratic and Political Leadership for Disaster Resilience, draws from the literature on public sector leadership, public sector innovation and entrepreneurship, and public network governance, to focus on both the individual leader as well as the relationships that one builds within one's networks. The analysis extends to understand the emergence of transformational or change-based leadership within public sector networks and the unique role of

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public sector actors, as agents of change, in the public interest within the collective policy discourse. The analysis of case studies on initiatives to build disaster resilience provides an understanding of the structured actions of actors within the system and its interface with the exogenous context of random forces and disasters. Across the six cases in this section, we observed the emergence of dominant patterns of transition management. The elements of integrative public leadership are largely absent in the disaster resilience practice within India's public sector, and the main focus continues to be on narrower sociotechnical transitions brought about by technological innovations without overall transformation of the social sector. Unlike the adaptive and transformational governance perspectives, which emphasise the involvement of the community and their gradual induction into the process, the traditional managerial perspective affixes accountability on individual actors for managing a transition, remaining ignorant of the power struggles behind any real change. Unlike the predictions made by Rotmans et al. (2007) more than a decade ago, transition management has remained in isolation and wary of new governance forms, focusing on pluralistic networks of government, market, civil society actors, and the community. Disaster resilience leadership cannot be limited to formal positions of power but should appear from within the government, at the boundary, outside government organisations, as well as from the grassroots to find solutions to complex social-ecological problems. The highlighted aspect is that it is not the individuals but institutions within which they operate which need changes, in its approach towards addressing more complex issues like disaster resilience, climate change, and sustainable development.

The third thematic section, on Civil Society Leadership for Disaster Resilience, draws upon the theoretical perspective of self-organisation within and outside the state to explore the assertions of marginalised groups in the Indian context for the purposes of representation, claims-making, and provision of civic infrastructure in the disaster context. By focusing on civil society organisations (CSOs), civic associations, and movements, the thematic section explores the unique factors that contribute to the emergence and development of grassroots-level representation and claims-making, especially with respect to the non-urgent phases of disaster risk reduction and long-term recovery. This section also attempts to understand the nature of civil society–state interface in the disaster and non-disaster context and its implication for grassroots-level leadership development and disaster resilience. The civil society initiatives that emerge from the everyday lived experiences of structural inequalities are rooted in values of social and environmental justice. These values guide all aspects of the collective action, such as the issues that they address, the at-risk communities they work with, the nature of networks they develop, and the strategies and interventions they adopt. The values and approaches have remained intact over the years, but depending on the changing context and needs of the groups, a diverse set of activities have emerged in each of the case studies explored. The task of building capacity and fostering grassroots leadership among the most marginalised is achieved through their engagement in activities, like protests and silent marches. These empowering experiences build trust and cohesion among

community members and other stakeholders in the network and, thus, contribute to greater community engagement and ownership. Community ownership and decentralised leadership have been crucial aspects of civil society initiatives. Leaders, primarily as volunteers, shoulder multiple functions apart from upholding the values and identity of the organisation, often amidst not-so-conducive contexts. Unlike the state and market, civil society functions within a network comprising various other stakeholders, with multiple interests that are often contradictory. It is evident then that leadership involves establishing and maintaining relationships, delineating and negotiating common issues of interest while working collectively for a goal along with other stakeholders. These grassroots initiatives also create space for a plurovicity of interests to co-exist and cooperate by bringing together autonomous entities, with their unique purposes under one umbrella, sans compromising on the larger value of social justice. Though the initiatives to elicit the direct engagement of the most marginalised are time-consuming, they bring about change which, in turn, have positive ripple effects in contributing to the building of disaster resilience in the long run. However, with the space for an independent civil society being restricted due to changing policy and funding norms, the recent project mode operations hamper long-term paybacks. The organisations, in order to sustain themselves, are working as implementing agencies in state-led programmes that are event-centric rather than transformative. The bandwidth of these initiatives to engage in large scale policy advocacy, too, is limited due to these restrictions.

The next thematic section, Institutional Leadership for Disaster Resilience, draws from old and new institutionalist theories to explore institutional emergence and change in new policy arenas, such as disaster risk reduction and management. It attempts to understand how the paradigm shift from relief to integrated risk management and resilience is reflected in the institutional arrangements beyond national-level regulatory bodies. The endogenous and exogenous factors that contribute to institutional emergence and change, such as leadership, role of science and technology, international stakeholders, and organisational values and culture, among others, are explored. The analysis shows the influence of exogenous macro institutional processes on each of the organisations and the role of leadership in the customisation and contextualisation of these institutionalisation processes that largely determine the organisation's contribution to building transformative disaster resilience. The chapter identifies endogenous factors that contribute to varied outcomes in each of the organisations, such as leadership, organisational culture and ethos, and the larger institutional framework in which each of the organisations was embedded. The predominance of technological and professional interventions, institutional constraints within the government sector, and target and outcome-oriented approaches among others, were the key challenges encountered in building transformative disaster resilience.

Though the case studies have been broadly categorised into different spheres in order to bring out the nuances of leadership, under different thematic sections, the boundaries are fluid and could be easily categorised differently. Moreover, as each

of these actors is embedded in a complex adaptive system, they are in continuous interface, and their actions are synergistic. The concluding chapter attempts to capture the interface between these actors and their contexts through the case study of drought management in Maharashtra involving a range of stakeholders at varying levels over the past 50 years.

50 Years of Drought Risk Reduction and Management in Maharashtra, India

Maharashtra, the second most populous state of India, is situated in the western part of the country. Owing to its geographical location and agro-ecological conditions, the state has been a witness to multiple droughts in the past. Almost one-third of the state lies in the semi-arid climatic zone. More than 80% of this area is rainfed. The state has experienced some of the worst droughts in the country. The years 1877, 1899, 1907, 1911, 1918, 1920, 1951, 1965, 1972, 1986, 1987, 2002, 2008, and 2012–13, witnessed particularly severe droughts. However, it must be noted here that though droughts are a regular occurrence in the state, their intensity, duration, and frequency vary across its sub-divisions.

In order to address the negative implications of drought on agriculture and allied sectors, soil and water conservation measures have been implemented across the country. The significance of these measures was also recognised during the British colonial rule. In order to address the issue of soil erosion, the Royal Commission on Agriculture recognised the need for afforestation in the United Provinces and stone bunding in the plain regions of Bombay. However, large-scale measures for soil and water conservation were not undertaken on private lands until after independence, except in Bombay. For example, the first major soil and water conservation measure in Bombay was linked to the programme for dry farming development that was later supported by the Famine Commission of 1945. Post-independence, irrigation was prioritised between 1950 and 1960, and several state governments enacted land development acts and attended to general rural development programmes, land reforms, creation of land development banks, and irrigation development (Jodha, 1990). The focus on soil and water conservation measures shifted to ravenous areas under the National Policy on Ravenous Watershed of 1967, to reduce siltation in reservoirs (Shah, 1998). The soil and water conservation measures remained confined to efforts by state governments under schemes that focused on wasteland development, reclamation of problem soils, drought-prone or backward areas development, and relief work or employment generation (Shah, 1998).

In Maharashtra, although substantial investments were made in irrigation systems for expanding agricultural activity, the drought of 1972 was the turning point as far as state policy and approach were considered. The years 1970–71 to 1972–73 were marked by sub-normal rainfall, the consequences of which were particularly severe. The drought of 1971–72 led to widespread starvation, forcing people to migrate on a massive scale. According to official estimates, out of 35,000 villages, 23,000 villages in 21 districts (out of the total 26 districts) in 1970–71, and 15,000

villages in 20 districts in 1971–72, were affected by scarcity (Ladejinsky, 1973). In 1972, the state government launched the Employment Guarantee Scheme (EGS) to provide employment in rural areas and create productive assets which, in turn, would generate more employment opportunities on a sustainable basis. During this period (1973–79), other central government-sponsored schemes, such as the Drought Prone Areas Programme (DPAP) and Desert Development Programme (DDP), were also launched in some districts of the state.

Simultaneously, various community-level interventions were also initiated in the state. Taking the lead were various community-based organisations and individuals. While some of these programmes were led by individuals (this eventually helped in transforming a village or cluster of villages), others were involved in bilateral or multilateral collaborations to enhance water availability in drought-prone regions of the state. Some of the initiatives managed to reach a larger population while others gradually died off. A few were replicated and upscaled in other states as well. The initiatives brought together are from various periods to the most recent ones. They also include large-scale projects undertaken by the state government. The timeline of the various interventions undertaken in Maharashtra is presented in Figure 10.1.

Drought of 1972–73: Catalyst for Interventions

Maharashtra faced two consecutive droughts in 1971 and 1972, affecting almost 80% of its villages and between 15 and 30 million people (out of a total population of 50 million). Agricultural production was at an all-time low, and there was mass migration from rural to urban areas. The rainfall deficit in the state was nearly 30% to 40%. Foodgrain production hovered around 54% of the output in 1968–69. Since the drought occurred over two successive years, landholders, who had exhausted their stocks of foodgrains, had no choice but to seek employment at worksites. With the drought entering its third year, even farmers who owned 10 hectares of farmland were forced to look for work (Kendale, 2011).

Employment Guarantee Scheme (EGS)

The EGS originated from the 1965 pilot experiments in the Tasgaon block of Sangli district in Maharashtra. In November 1970, the Page Scheme (initially known after V. S. Page, the Gandhian leader and chairman of the state legislative council) was expanded to cover 11 districts across the state. In 1972, the scheme was implemented on a large scale as a drought-relief measure.

The EGS follows a rights-based approach to providing rural employment on demand as expressed through the slogan, *magel tyala kaam* (work to whosoever demands it). It was formalised as the Maharashtra Employment Guarantee Scheme Act of 1977, in which the government of Maharashtra recognised the people's constitutional right to work (Article 41) and applied it for sustained rural development with a special focus on agricultural productivity. The Act came into force

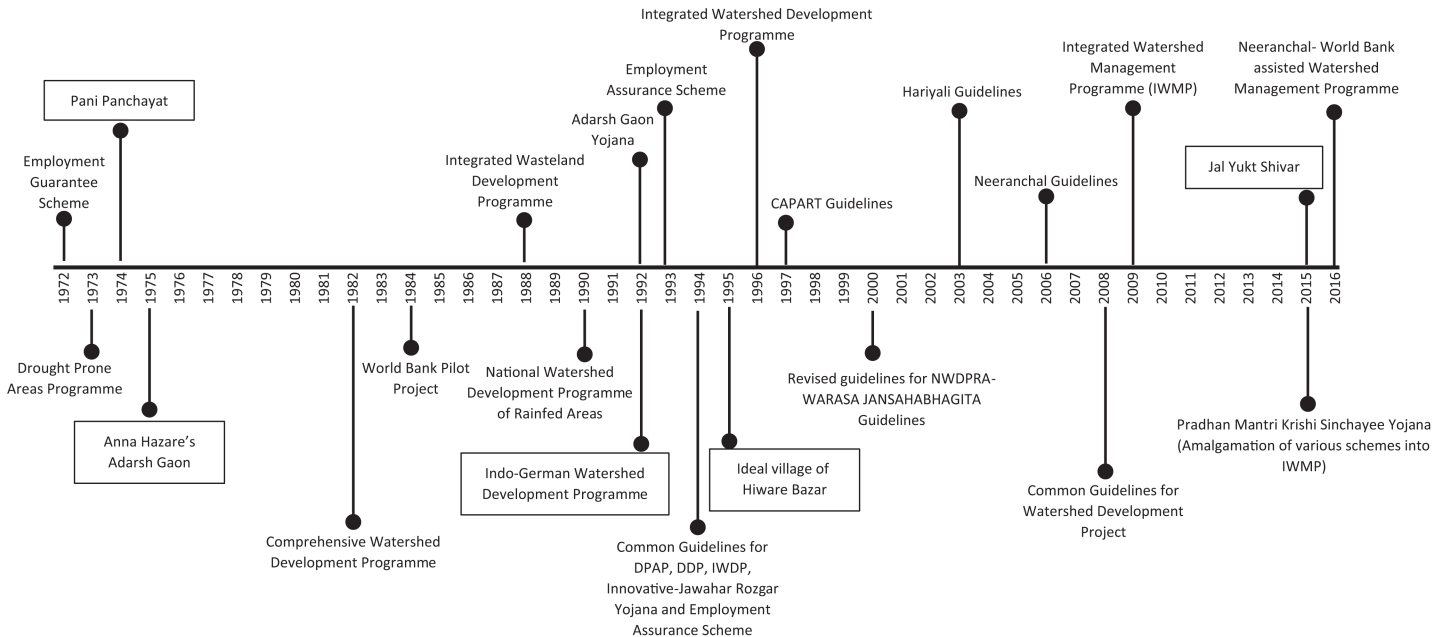


FIGURE 10.1 Timeline of Interventions for Drought Management in Maharashtra, Post-1970

on 26 January 1979. The EGS gave priority to works that contributed to drought mitigation in the state, that is, irrigation projects, construction of percolation and storage tanks, and building of dams and bunds, soil conservation and land development work, afforestation, and social forestry. It was implemented through the agriculture, irrigation, public works, forest departments, and *zilla parishads* (district councils) (Vatsa, 2005).

Though the EGS was successful in providing drought relief in the short term, it did not contribute to reducing the vulnerability of the state to drought and drought-like conditions. As Vatsa (2005) states that, over the years substantial investments in soil and water conservation measures were made through this scheme, but it did not result in the creation of assets in the irrigation and agriculture sectors. As a result, the availability of surface and groundwater to farmers did not improve due to which there was no improvement in agricultural productivity. The scheme, however, served as a precursor to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) that was implemented on 2 February 2006. The objective of the Act is as follows:

> [P]rovide for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work and for matters connected therewith or incidental thereto.
>
> *(MGNREGA, 2005)*

The Act draws its objectives, structure, and approach to implementation from the EGS. In Maharashtra, the EGS is now implemented under MGNREGA.

Other Major Initiatives

After the EGS, the Maharashtra government launched the Comprehensive Watershed Development Programme (COWDEP) by combining the budgetary resources of the EGS and the technical provisions of the Bombay Land Improvement Schemes Act, 1942, for large-scale watershed development. However, the programme was not successful in stabilising agricultural production and containing large-scale migration of people to urban centres in search of jobs. The main obstacle was the lack of coordination among the various line departments implementing it.

A World Bank report of 1989 states that COWDEP, being a sequel to the EGS, focused largely on single activities. It differed from the EGS in that it carried out projects on private properties, too, and focused expenditures on particular villages, to the exclusion of many others. The soil conservation practices under the EGS were taken up, on an ad hoc basis and proved "costly" and "unsuccessful as rehabilitative measures" (Hanson & Lieberman, 1989, p. 102). Alongside these interventions, multiple central government-promoted schemes (discussed

in the following paragraphs) were being implemented in different pockets of Maharashtra.

The DPAP, a technical programme under the aegis of the Ministry of Rural Development, did not envision the participation of local inhabitants and covered 14 districts in 1973–74. Later in the 1980s, this programme became an exclusive watershed development programme.

The Integrated Wasteland Development Programme (IWDP) was launched by the Ministry of Environment and Forests in 1988–89. It was later transferred to the Department of Wastelands Development, now known as the Department of Land Resources, under the Ministry of Rural Development. This programme covered almost 26 districts in Maharashtra with maximum projects implemented in the districts having large tracts of wasteland.

To improve agricultural productivity, the World Bank initiated a pilot project in drought-prone states of India. The project's guiding philosophy was "that low-cost soil and water conservation measures, including improved agronomic practices like contour cultivation and vegetative rather than mechanical bunds, could make a strong contribution to rainfed agricultural development at a relatively low cost" (Kerr et al., 2002, p. 18). After the first phase ended in 1991, the second phase, called the Integrated Watershed Development Project, was launched. But it did not include Maharashtra.

The National Watershed Development Project (NWDPRA) was started by the Ministry of Agriculture in 1990–91. Its major objective was to stabilise rainfed agriculture and improve the production of food, fuel, and fodder, so as to improve the lives of farmers and landless agricultural labour. The programme covered nearly 33 districts in Maharashtra. As mentioned in a report by Samuel et al. (2007), all these government (central or state) sponsored programmes contained problems related to people's participation and sustainability of interventions concerning the maintenance of assets created. They argue that the maintenance of the assets depends largely on social and institutional mechanisms, which were poorly addressed in these programmes. The projects did not aim at the participation of the communities they were intended to benefit. Even though guidelines were later framed to promote people's participation, they were not operationalised in the programmes.

Considering the need for coordination, and reforms based on learnings from earlier implemented projects, the Maharashtra government launched the *Jal Sandharan* (Water Conservation) Programme in 1992. It proposed having a comprehensive approach to watershed development and bringing government departments under one umbrella. Later, *Jal Sandharan* was constituted into a separate department in itself and resulted in the re-organisation of certain other departments. The Department of Soil Conservation (Department of Agriculture), the Directorate of Social Forestry in the Forest Department, Minor Irrigation Division (Irrigation Department), and the Groundwater Survey and Development Agency were all brought under the administrative control of the *Jal Sandharan* Department.

This department would handle funds from centrally sponsored programmes mentioned earlier and the *Jawahar Rozgar Yojna* (Jawahar Employment Scheme).

The difference was that the programme considered the village as the unit of planning. Implementing work on micro-watersheds that lie within village boundaries was the responsibility of the committee formed at the district level. This committee represented all the government departments involved in the project. Work in the village would be taken up after consultation with the villagers and the consent of the leader of the village (*sarpanch*). However, the lack of coordination continued to prove an obstacle to implementation. Coordination at the upper levels of bureaucracy did not translate into coordination at the village level, where all the departments involved worked with separate budgets and targets (Kerr et al., 2002). It was around this time that the work of NGOs and individuals at the local/village level started to gain momentum. Their approach was participatory and inclusive, since villagers were involved in the planning and implementation of the watershed development activities.

NGO-Government Collaborative Projects

When Maharashtra was suffering from consecutive droughts, especially those of 1971–72, there were small pockets in the state where initiatives were taken by individuals in their villages to mitigate the impact. The need for a community-based approach was then just beginning to be articulated. According to Kerr et al. (2002), even though the programmes run by NGOs were not uniform, all of them were based on a strong social conviction. They mention two significant aspects that distinguish government programmes from those led by the NGOs. The first is the scale of operations of the NGOs, and the second, their staffing structure. They also observe that with its command over a huge budget, the government work covered a large number of villages. The focus of state-led programmes was mainly on watershed development activities that are highly technical in nature and, therefore, need trained staff. In contrast, the NGOs devoted more time in one village, focusing not only on one activity but also on other issues and activities that required attention. The staff of the NGOs are well-trained in community organising, with most of them equipped to collaborate with government agencies to provide technical expertise whenever needed. The success of these programmes is reflected in the revised government guidelines for the implementation of watershed development projects.

The first of such initiatives led by an individual, *Pani Panchayat*, was taken up in the 1970s in the small village of Naigaon in Pune district (see Chapter 3). The water harvesting and soil conservation interventions were participative and built on strengthening institutional arrangements. Despite being widely lauded as a significant achievement in water management, it failed to become part of the larger policy framework in Maharashtra and remained localised. This does not, however, diminish the significance of the *Pani Panchayat* movement because it was the first major initiative for community participation in managing water resources. Indeed, its ideas, concepts, and principles have found a place in the Policy Directives of the states of Andhra Pradesh, Odisha, and Madhya Pradesh. Similarly, in the early 1980s, the water management programme in Ralegan Siddhi, Ahmednagar district,

focused not only on activities for soil and water conservation but also on bringing about social change, thus, fostering a holistic transformation in the village.

It was around the same time that many NGOs took up various activities, like community lift irrigation schemes, loans for farmers, and other water conservation practices. A few of them also managed to get upscaled and mainstreamed into government-led programmes later, like the Indo-German Watershed Development Programme and *Jalyukt Gaon Abhiyan* (for more details, see Chapter 5). Some of these key initiatives led by individuals or NGOs are discussed in the following section.

Adarsh Gaon of Ralegan Siddhi

Ahmednagar is a drought-prone area located in the rain shadow region of the Sahyadri ranges. The rising unemployment due to drought and loss of agriculture-related incomes led to an increase in social unrest. It was obvious that it was not only the growing water scarcity but also developmental issues, that needed to be engaged with, in order to strengthen community engagement, ownership, cohesion, and harmony. In the early 1980s, watershed development work in this district marked the first instance of people's participation in watershed development. An initiative by Anna Hazare, an ex-army man, not only proved beneficial in bringing prosperity to the village but also drew national attention and became a country-wide programme. Ralegan Siddhi is situated in Parner taluka of Ahmednagar district. Like other villages in the region, it frequently experienced droughts, and its consequences are as follows: depletion of water levels, low productivity, and poor incomes. People migrated to the big cities in search of jobs. The pervasive feeling of hopelessness led to social tensions with alcoholism, and its attendant problems becoming rampant.

Kisan Hazare, popularly known as Anna Hazare, had returned to his village after retiring from the army. He saw the deteriorating state of the village, characterised by migration, poverty, and alcoholism, and decided to organise the village community to improve the situation and combat the drought. He appealed to his fellow villagers to work with him in order to achieve this goal. Hazare's first act was to renovate the temple of the local deity which was in a dilapidated condition. He asked the villagers to help with the renovation by either contributing money or voluntary labour. Hazare contributed some money from his pension for this purpose. Gradually, he gained the village's respect and began receiving support from the village youth. Next, he directed his attention to the problem of alcoholism. Liquor vending was made illegal in the village, and as a result, liquor vendors started to shut down. Watershed development and conservation measures, such as renovation and restoration of percolation tanks, construction of community wells, gully plugs, contour trenches, and related work were taken up. Women were encouraged to participate and were involved in all activities.

The efforts bore fruit. With the completion of watershed development, the area under cropping increased from 630 hectares to 965 hectares. The total irrigated

area increased from 56.43 hectares to 464.74 hectares. These improvements led to overall community development and a sense of well-being. Anna Hazare insisted on following the *panchsutri* (five principles) framed by him which, he believed, would make his village an *adarsh gaon* (model village). The five principles were *nashabandi* (ban on addiction), *nasbandi* (sterilisation), *kurhadbandi* (ban on cutting trees), *charaibandi* (ban on grazing), and *shramdaan* (donation of labour). The intervention led by Anna Hazare not only catered to the demand for water but also effectively addressed the social issues affecting the village. Since Anna Hazare's work involved the village and community, he could achieve the objectives with the willing participation of his fellow villagers and without much difficulty. Ralegan Siddhi's transformation motivated other communities, and soon, the Maharashtra government decided to replicate and institutionalise the model as the *Adarsh Gaon Yojna*.

Adarsh Gaon Yojana (AGY)

In 1992, the state government announced the launch of the AGY to replicate the success of the Ralegan Siddhi model in select villages in 300 talukas of the state. The purpose was to provide, among others, access to safe drinking water, employment opportunities, and green fodder so that a village could sustain itself. A major criterion for the selection of a village for implementing AGY was that it should be located in drought-prone areas and should face a shortage of drinking water. The *panchsutri* that Anna Hazare imposed in Ralegan Siddhi applied to the AGY scheme also.

The programme was implemented through a village-level NGO registered under the Commissioner of Charitable Trusts. A state-level committee for implementation and monitoring decisions regarding the villages was to oversee the choice of project implementing agencies, sanctioning of budgets, releasing grants, removing villages that did not perform upto the standards, and forming village, taluka, and district-level committees. However, all the efforts by the government to mitigate the successive droughts through these programmes during the 1970s and 1980s did not yield the desired and expected outcomes. A lack of integrated planning and implementation, an inability to work in forested areas where the land was in the possession of forest departments, a lack of coordination between various line departments, an absence of involvement of local people, a lack of awareness among people, and a lack of ownership of these programmes are a few reasons for the failure (Kerr et al., 2002).

The state faced another major drought in 1987. During this period, many NGOs, like the Bharatiya Agro Industries Foundation, Development Foundation, and Marathwada *Sheti Sahayya Mandal* (Farmer's Support Group), were working individually in their project areas. Around this time, another effort by an individual towards drought mitigation, taking inspiration from the Ralegan Siddhi model and utilising the existing scheme of EGS, helped in the transformation of a village named Hiware Bazar. It also earned the village the title of Adarsh Gaon under the

leadership of its village council head, Annarao Patil (name changed, see Chapter 5), who, in 2009, was made chairman of the AGY with a mandate to replicate the success of Hiware Bazar across Maharashtra. After becoming the chairman of the scheme, he added two *bandis* (bans) to the existing *panchsutri* to make it *saptsutri* (seven principles). The two additional principles were a ban on borewells and open defecation. At present, Patil plays the role of mentor to people, organisations, and the government on issues related to water conservation. He has ensured that all systems are in place and working, and the gram panchayat is capable of maintaining the work and carrying it forward.

In parallel, on a bigger platform, a development discourse was taking place. It was focused on the importance of environmental regeneration along the lines of watershed development which had the potential to find sustainable solutions for consecutive droughts. NGOs like Action for Food Production, Bharatiya Agro Industries Foundation, Marathwada *Sheti Sahayya Mandal*, and many others were working at the local level towards poverty alleviation, environment regeneration, and agricultural development. These organisations came together to formulate a long-term strategy for drought-proofing. They met in Ahmednagar in 1987 to find suitable solutions.

One of the NGOs participating in this meeting was the Social Centre, an NGO formed by the Swiss Jesuit Fr. Hermann Bacher, during the 1960s. Bacher was the resident representative of the MISEREOR (German Catholic Bishops' Organisation for Development Cooperation) in India, which was leading efforts for watershed development in a few villages in Ahmednagar district. The work done by the Social Centre was visible and known to the other NGOs. Its work in treating drainage lines and independent irrigation had yielded positive results in terms of increased productivity and reduced migration. The results highlighted the effect of people's participation in watershed development as Bacher's approach was highly participatory. His work earned him credibility and respect in the development sector and the political establishment. At the meeting in 1987, he proposed the idea of a programme for participatory watershed development at the state level to make Maharashtra drought-proof.

Indo-German Watershed Development Programme (IGWDP)

Bacher arrived in India in 1948 to pursue his goal of working in the rural areas of Maharashtra. He founded Social Centre in 1968 in Ahmednagar to work with farmers to enhance water availability and agricultural production in drought-prone regions. He began by undertaking lift irrigation schemes for small farmers. He also engaged with different stakeholders, such as line departments, banks, and agricultural universities, and networked for funds as well as technical knowledge to improve agricultural practices. In the 1987 meeting, Bacher proposed that all NGOs work together on a large scale towards the objective of drought-proofing the entire state of Maharashtra. All the NGO representatives present expressed their reservations, citing lack of funds and training. Bacher took the lead in the efforts

to make funds available and provide training and support to the NGOs. The seeds for IGWDP were sown.

The German government conducted a study in 1982 to assess the effectiveness of official aid in developmental activities, such as poverty eradication. Aid is most successful when it reaches the impoverished directly, the study concluded. In 1983–84, the German government established a cell to reorient the process of aid distribution by bringing together major development institutions in the government and the NGOs, both in Germany and in selected developing countries, through a process of dialogues and reflections that included the German Ministry for Economic Cooperation (BMZ), the German Bank for Development (KfW), the German Agency for Technical Cooperation (GTZ), and MISEREOR. The Indo-German Pilot Programme was launched shortly after this study, with the BMZ, GTZ, KfW, MISEREOR, and the German Foundation for International Development on the German side; and the Department of Economic Affairs, Government of India, National Bank for Agricultural and Rural Development (NABARD), Commercial Banks, Indo-German Social Service Society, Indian Institute of Management, and a few NGOs on the Indian side. This was done to find ways to improve the access of the rural poor to credit and establish measures to refocus development funding so that it reached the intended beneficiaries.

Bacher was also engaged in the Indo-German Pilot Programme study and took this opportunity to pitch a large-scale project for participatory watershed development in 1989, which was later called the IGWDP. Thanks to his credibility, he succeeded in convincing both the Indian and German governments to accept and approve the sanctioning of funds. Bacher brought on board different stakeholders, such as the government of Germany (BMZ) and its developmental institutions (KfW and GTZ), and the NABARD, who, along with voluntary agencies and self-help groups (SHGs), formed a partnership and laid the foundation for the IGWDP. It involved a wide range of stakeholders, from international to local. This included the KfW and GtZ from the German government. From the Indian side, the Ministry of Finance, NABARD, the Watershed Organisation Trust (WOTR), the Department of Agriculture at the state level, and the Soil and Water Conservation and Forestry departments were also involved. At the village level, watershed committees were formed. Voluntary labour was provided by the communities, including the women. Operationalised in 1993, IGWDP was implemented in two phases: the capacity-building phase lasting 12–18 months and the full implementation phase of 36–48 months.

In 1995, a women's development programme was designed to involve women in addressing their needs which included the formation of SHGs and allocation of funds for development activities. The programme also devised an exit strategy that involved training and empowering the village communities to maintain the assets created by the programme along with setting up of a watershed development fund. The committee was set up to implement and monitor the tasks, and a maintenance fund was created for which it collected Rs. 100 per family per annum. Half of the amount reimbursed for voluntary labour (ten percent) was also contributed to this fund.

The impacts were visible in terms of a shift in the cropping pattern in the watershed, that is, their diversification.

Phase I of the IGWDP in Maharashtra began in 1990–91, with a sanctioned aid value of Rs. 2,666.6 lakhs (€6.14 million). It was finished in 1999–2000, with 26 projects completed successfully. Phase II began in 1999–2000, with a grant sum of Rs. 5,748.6 lakhs approved. During this phase, 69 projects in 16 Maharashtra districts were completed, covering a total area of 64,205.77 hectares (NABARD, n.d.). After completion of phase I, there was a full transfer of approach and technology to the NABARD team. It was after this phase that the programme structure was changed with the dilution of the position of programme coordinator and diversion of the entire money to NABARD. The WOTR, however, was involved in the capacity-building phase, independent of German funding. After 2009, NABARD took over the capacity-building phase as well. The programme was extended by NABARD to the states of Rajasthan, Gujarat, and Andhra Pradesh with funds received directly from KfW. It ended in 2016.

The IGWDP's concepts and processes, such as capacity building in a separate phase, ridge-to-valley treatments, site-specific and community-determined measures, participatory net planning or net planning for land and water resources, and civil society–public sector partnership, have been adopted by a number of government-run watershed programmes across the country. The success of the IGWDP Maharashtra led to the setting up of a watershed development fund by NABARD in 1999–2000 with a corpus of Rs. 200 crores. The Government of India and NABARD contributed Rs. 100 crores with a broad objective of amalgamating the multiple watershed development programmes into a single national-level initiative through the involvement of village-level institutions and NGOs. This fund has been used by NABARD to implement watershed development projects on the same lines as the IGWDP across other 100 priority districts in 18 rainfed states. It follows the same guidelines that were framed for the IGWDP, which were revised in 2006 and again in 2016.

In 2008, the central government issued the Common Guidelines for Watershed Development which adopted several aspects of the IGWDP's approach to watershed development, such as the mandatory 10% contribution to the cost of the project by beneficiary villages. For the last 20 years, an expert NGO representative has been a participant in pre-budget consultations at the invitation of the finance minister of the central government as an expert in the agricultural sector. An NGO representative has also been appointed to the Expert Working Group on Water Resources Management of the NITI Aayog. Several NGOs, like WOTR along with NABARD were instrumental in establishing the Government of India's National Adaptation Fund on Climate Change in 2014 for enhancing resilience in India.

All developmental projects face the common challenge of bringing the target communities together and motivating them to volunteer. However, Bacher's close association with villagers through his work in implementing the drought mitigation measures since the 1980s helped him in gaining their support and trust. It

was his strong networking skills, knowledge, and awareness of existing legal and institutional frameworks that worked in their favour. Though the project could be upscaled due to the enabling institutional and policy frameworks, as well as the networks that were established, a dilution was observed in the efforts. This was particularly noticeable in the changes made in phase II of the project. Despite these changes, the pedagogies and guidelines, and the institutional arrangement developed for the project, were adopted by the government for framing the guidelines for implementation of the Watershed Development Project.

The NGOs that were involved in the IGWDP continue to implement watershed development and climate adaptation projects in their own capacities with the help of funds from various sources: foreign, corporate social responsibility, and various government schemes. The watershed projects promoted by the government, such as the erstwhile Integrated Watershed Management Programme, also involved these NGOs as principal implementing agencies. There have been noteworthy efforts by the government in collaboration with NGOs for the regeneration of watersheds. However, in many of the villages where work had been undertaken in the past, the assets created were found to be in dilapidated conditions. The lack of community efforts at maintaining the structures and unsustainable agricultural practices post-implementation, has led to the deterioration of the benefits. With increasing climatic variability and erratic rainfall, droughts and drought-like conditions continue to haunt the rural communities of Maharashtra.

The Drought of 2013: Worst in Four Decades

The state experienced yet another drought in 2013, considered to be as severe as the one of 1972. According to then agriculture minister, "The drought situation in Maharashtra is the worst seen in the last 40 years. There's a shortage of drinking water. The affected area has many dams, but there was no rain in the catchment area" (*Economic Times*, 2013, p. 2). By the end of August 2013, Maharashtra had received only 58% of its normal rainfall. It became dependent on water tankers and more than one-fifth of the state felt the impact of drought (Torgalkar, 2015). As a reactive measure, the Maharashtra government launched a state-level scheme called Jalyukt Shivar Yojana (JSY) in 2014, the objective of which is to make Maharashtra a drought-free state. The project involves activities, such as widening and deepening of streams, constructing of earthen or cement check dams, and digging of farm ponds. The programme aimed to make 5,000 villages free of water scarcity every year (see Chapter 5). The JSY claimed to have created decentralised waterbodies to permanently overcome the situation of water scarcity. By the end of five years, it was expected that 25,000 villages would be water self-sufficient.

However, the scheme has had its fair share of criticism. Most of the work done under it was for deepening/straightening of stream and rivers, which is harmful to the riparian ecosystem. As there were no plans to manage the silt after the desiltation of the streams, heavy rains may lead to resiltation of the streams. Similar issues were observed in the placement of recharge shafts for drinking water, which were

placed in the streams, where siltation may affect groundwater quality. Not enough thought was given to the maintenance and management of the structures created because the programme lacked sufficient focus on community involvement and ownership. Without the appropriate mechanisms, over time, the work done under JSY may deteriorate and degrade, which would defeat the purpose and objectives of the programme. Following this scenario, another cycle of planning, investments, and implementation of water conservation actions may begin. The 2013 droughts also witnessed a surge in NGO and CSO activities under the leadership of eminent film and political personalities.

Institutional and Policy Reforms in Maharashtra

The state government has also introduced a pioneering policy and institutional reforms to address the situation of water crisis that arises due to recurrent drought and drought-like situations. These reforms are aimed at efficient water management practices and the accountability, transparency, and financial sustainability of the water sector. Maharashtra enacted a groundwater regulation in 1993 that contained a provision to regulate the overexploitation of groundwater. This regulation was later replaced by the Maharashtra Groundwater (Development and Management) Act, 2009, that came into effect in 2014. It aims at sustainable and equitable groundwater supply and regulation with community participation. It also empowers the Maharashtra Water Resources Regulatory Authority (MWRRA) to act as the state groundwater authority and has a key function in implementing the provisions of the Act in coordination with the Water Supply and Sanitation Department and the Groundwater Survey and Development Agency. The MWRRA was established under the ambit of the MWRRA Act, 2005. It is an institutional framework to regulate, allocate, and plan for sustainable development and management of water resources for various categories in a judicious and equitable manner.

The state also has its own water policy which was framed in 2003 and revised in May 2011. With an objective of ensuring sustainable development and optimal use and management of water resources, providing economic and social benefit for the people of the state, and maintaining ecological values of rivers and adjoining lands, the adaption of the policy brought in significant changes in the water sector. However, to address the continuously emerging issues and challenges, the policy was again revised in 2019. The aim of the policy is as follows:

> [T]o appraise all the line departments, local bodies, agencies working for the water sector, industries and all the water users of the State their rights, roles and responsibilities along with the planned strategies, expectations and directions of the State Government for the achievement of specified objectives.
>
> *(Maharashtra State Water Policy, 2019, p. 5)*

The state government launched the Maharashtra Management of Irrigation Systems by Farmers Act in 2005 to authorise farmers' management of irrigation

system. This act promotes the principle of participatory irrigation management with the involvement of the Water Users' Association (WUA). The act mandates the supply of water only to the WUA and on a volumetric basis. The WUA aims to do the following:

> promote and secure an equitable distribution of water amongst its members, to maintain adequately the irrigation systems, to ensure efficient, economical, and equitable distribution and utilisation of water to optimise agricultural production, to actively involve the members and promote the common interests of its members pertaining to irrigation and agriculture in the area of operation.
>
> *(Maharashtra Management of Irrigation Systems by Farmers, 2005, p. 8)*

Analysis and Discussion

Maharashtra has been facing droughts at intervals over a long period. The impact can be seen in decreasing agricultural production, water scarcity, unemployment, and related social issues. The recurrent droughts lead to the weakening of community capacities and resources, resulting in further deterioration of the socioecological system. Though drought relief measures were rolled out since the colonial period, not much emphasis was given to rainfed area development in the post-independence period, as the pre-occupation centred on irrigation and increasing agricultural production to achieve self-sufficiency. Following the 1972 drought, many interventions were taken up by both formal as well as informal stakeholders. However, Maharashtra continues to experience droughts or drought-like situations almost every year. The effects of below-average rainfall are aggravated manifold by the mismanagement of water resources, like over-extraction of groundwater, further compounded by administrative actions that have failed to comprehend the crucial aspect of demand-side management. We attempt to understand the best practices demonstrated by leaders at various levels and the challenges encountered in building disaster resilience to recurrent droughts.

Droughts as Catalysts for Innovation, Diffusion, and Change

The droughts in Maharashtra have been instrumental in bringing forth several innovations, such as the EGS in 1972, the first such programme in the country; *Pani Panchayat* in 1974 which demonstrated the use of technology and participatory processes in minimising drought impacts; *Adarsh Gaon* in 1975 which demonstrated the potential for participatory processes; and the Maharashtra Employment Guarantee Scheme Act of 1977 that recognised people's constitutional right to work, among others. Though most of these have been reactionary in approach, they have been replicated within and outside the state, often at the national level, contributing to changes in the formal and informal institutional arrangement in the

country. Though several actors have been instrumental in bringing about innovations and demonstrating efficacy, the state has played a significant role in the upscaling of these innovations and institutionalising them through guidelines, policies, and institutional structures. However, despite the efforts spanning around 50 years, there is a long way to go in building resilience to droughts. The various efforts that were initiated many years ago are yet to achieve sustainability. Often, old projects are revived under a new name. The EGS had yielded excellent outcomes in a variety of ways, including effective drought relief, improved rural employment, extra income, women's engagement as an important class of workers and income earners, and social cohesion.

One key goal of EGS was to drought-proof the region by constructing water harvesting structures that would provide water for drinking as well as irrigation all year. However, the initiative has had little impact on the state's drought-proneness or poverty. Despite the resources mobilised through the scheme, poverty levels have not fallen below the national average (Vatsa, 2005). The frequency of droughts increased, and their impacts, including unemployment, became chronic. It was then realised that the focus of these programmes should shift to group beneficiary programmes, like lift irrigation schemes and drainage line treatments. Recognising this need, the government turned its attention from employment guarantee programmes to those that were focused on enhancing agricultural productivity through watershed development, like COWDEP, DPAP, NWDPRA, and IWDP. The approaches were directed at improving irrigation potential and/or developing rainfed agriculture. But the conceptualisation of the programmes and the manner of their implementation did not reflect the coherence and convergence of various approaches. Further, at the operational level, the coordination required among various government departments was not easily achieved. The programmes relied heavily upon technology and less on demystifying it for the communities so that they would gain confidence in taking ownership of the assets created.

Chhotray (2011) observes that even though the central and state governments emphasise watershed developments, their approach has invariably been 'top-down and based on inflexible technology' with little to no attention to participation and local institutional arrangements. Kerr et al. (2002) and Samuel et al. (2007) point to the shortcomings of the programmes as follows: implementation of COWDEP required coordination among several line departments which proved to be difficult; DPAP, being a technical programme, did not have any arrangement for people's participation or provisions for developing and strengthening local institutional systems; the World Bank pilot project modified the institutional arrangements for operationalising projects; and dedicated offices were established at both central and state levels to facilitate and oversee administrative coordination. However, because it was a centrally developed plan, there was a greater focus on implementing proven technologies in local conditions with little regard for the need to be flexible. People's participation was limited to taking their consent for pasture development; the NWDPRA adopted the Ministry of Rural Development's guidelines (Watershed Areas' Rainfed Agricultural Systems Approach [WARASA] or the *Sahabhagita*

Guidelines) which mentions people's participation. However, there was neither a strategy nor a budget. Sometimes, the implementation plan would include one village and exclude several neighbouring ones. This led to several complications from the administrative perspective, which was largely the outcome of a lack of institutional arrangements within the villages in the programme. The *Jal Sandharan* programme claimed to incorporate the lessons learned from the previous ones, but it, too, faced issues of coordination between the upper-level bureaucracy and village-level administration. The subsections that follow further explore some of these limitations and challenges encountered in building resilience.

Institutionalisation of Drought Management and Its Limitation

Most consecutive programmes developed by the state, especially in the last two decades, have been developed by combining provisions of existing programmes. The new programmes clearly demonstrated incremental path dependence in the nature of change that they envisaged and did not bring about any substantive changes but for the governance transitions. For example, the COWDEP of 1982 was initiated by combining the budgetary provisions of the EGS and the technical provisions of the Bombay Land Improvement Scheme Act, 1942. The Integrated Watershed Programme Management of 2009 combined the DPAP and DDP to develop an integrated programme towards the optimum use of resources and integrated planning for sustainable outcomes. Whereas the JSY of 2014 and *Pradhan Mantri Krishi Sinchayee Yojana* (Agriculture Irrigation Scheme) of 2015, too, were initiated by combining provisions of existing programmes, schemes, and funds. Thus, these programmes often inherited the limitations of their predecessors, and the adjustments made to address these limitations were minimalistic. Hence, the key challenges concerning coordination among stakeholders and community engagement continued to be an unresolved issue hampering outcomes at the grassroots.

International Processes Facilitating Institutionalisation of Integrated Drought Management

International influence, too, was visible in the institutionalisation processes, such as that of the World Bank projects in 1984, 1996, and 2016; and the IGWDP in 1989 that had international partners, such as the BMZ, KfW, GTZ, and MISEREOR, among others. These internationally funded programmes had universal blueprints of strategies and institutional arrangements for watershed development, in contrast to the context-specific approaches that local actors had initiated. The specific and generic nature of the programmes had significant implications for outcomes achieved. The context-specific initiatives more often or so lead to developmental outcomes with the potential to transform behaviour, thus, building resilience over time. The generic initiatives were target-oriented and resulted in episodic outcomes, lasting only for the period that the interventions were undertaken, thus,

compromising the sustainability of the outcomes and increasing the dependency of the communities. The international stakeholders primarily provided technical assistance and facilitated the adoption of more effective processes, technology, and institutional arrangements, beyond the provision of funds. These international processes, too, were instrumental in redefining the nature of interventions and the roles of different stakeholders, especially that of CSOs as technical experts, consultants, and implementers, among others.

Institutionalisation of Individual and Civil Society Innovations

The successful initiatives by individuals and CSOs in response to the challenges posed by droughts were recognised by the state and institutionalised through guidelines, policies, and institutional structures. For example, the unique participatory processes demonstrated through the successful initiatives of individuals and CSOs were institutionalised through WARASA (2000), also known as the *Sahabhagita* Guidelines, which mandated the planning and implementation of the watershed development programmes through local watershed communities. The last two decades have witnessed several such guidelines towards the institutionalisation of the role of civil society and community participation, more in line with the concerns of state withdrawal, responsibilisation of communities, and the sidelining of CSOs. Several guidelines were also instituted to empower PRIs and ensure community participation, such as the *Hariyali* Guidelines of 2003 and *Sahabhagita* Guidelines of 2000. The establishment of the National Authority for the Sustainable Development of Rainfed Areas (NASDORA) and District Watershed Development Agency (DWDA) within each district in 2006, among others, were some of the institutional arrangements made for better integration and enhancing of processes. However, the operationalisation of community participation suffered to a great extent, as these formal processes did not capture the essence of community social relations and processes. Moreover, there was no budgetary provision and commitment that backed the implementation of these guidelines.

Technical and Scientific Nature of Interventions, Ignoring Social Aspects

Since the initiation of the DPAP, the focus of the interventions has been primarily technical with more emphasis on scientific aspects as compared to social. The programmes continued to be technical and inflexible in their orientation in addressing the varied challenges encountered in previous programmes. Integration and coordination were repetitively identified to be the key concerns in the operationalisation of state interventions, and the new versions of the watershed and wasteland development programmes primarily focused on governance transitions to address the same. The increasing emphasis on community participation and the successful demonstration by civil society resulted in the institutionalisation of community

participation, neglecting other dimensions of social relations and processes. Thus, apart from shifting the responsibility to communities, the institutionalisation of community participation did not result in the desired outcomes of inclusion and community ownership.

Changing Nature of Civil Society Contribution

Maharashtra has been a pioneer in demonstrating the participatory groundwater management approach through the initiatives of individual actors and CSOs. Though the state was proactive in institutionalising the salient features of participatory approach through policy guidelines, this also contributed to the sidelining of CSOs that were often the catalyst in initiating community participation. For example, the *Sahabhagita* Guidelines mandated that watershed development would be planned, implemented, monitored, and maintained only by watershed communities. The role of CSOs was reduced to that of capacity building or that of technical consultants, pushing them to focus more on technical rather than social aspects. Thus, professional CSOs, primarily rendering technical services, worked in partnership with the government to implement projects for watershed and wasteland development. Thus, the role of civil society representing the community and the most marginalised voices was sidelined or diluted as follows: prominent community and civil society representatives were nominated as experts in various committees, such as the chairperson of AGY to replicate the success of Hiware Bazaar across Maharashtra; as agriculture experts in pre-budget consultations organised by the finance ministry, Government of India; and as members of the Expert Working Group of Water Resource Management of the NITI Aayog, among others.

Civil society actors, too, influenced other stakeholders, like being instrumental in institutionalising the National Adaptation Fund on Climate Change in 2014 towards building resilience. However, their technical and professional expertise, and not as representatives of communities, was the criteria for inclusion. In line with the critique of transition management (Grove, 2013; Kenis et al., 2016), the representation of communities in expert committees by expert representatives of CSOs, too, could be seen as a form of structural exclusion. Over the years, organisations that were instrumental in initiating participatory watershed management programmes were gradually reduced to the implementer and later, replaced by government institutions such as NABARD. The sidelining or structuring of civil society engagement at the grassroots as per the international funder or government mandate had implications for community participation and sustainability of project outcomes. The subsection that follows highlights some of these challenges.

Challenges of Shifting Responsibility to Communities

One of the key critiques of resilience discourse is that of state withdrawal and responsibilisation of individuals, groups, and communities living with risk. The case studies, too, demonstrate the increasing emphasis on community responsibility

in the disguise of participatory approaches. Unlike the pilot initiatives by the CSOs, the state schemes and programmes did not have either strategy or budgetary provisions to support the watershed communities that had the responsibility of planning, implementing, monitoring, and maintaining watershed development programmes. As a result, the assets created through these projects were seldom maintained, and a renewed mission in the form of subsequent programmes was required to revive or rebuild defunct community assets. Though PRIs and watershed communities were central to the planning, implementation, monitoring, and maintenance, the schemes and programmes were oblivious to the social relations and processes that continued to marginalise the most vulnerable sections. Most programme benefits were reaped by influential stakeholders to the exclusion of the most marginal sections, thus, contributing to increasing rural inequality (Shah, 1998).

Having recognised the challenges of working with local institutions, the state set up formal institutional arrangements at the central and local level, like NASDORA and DWDA, and issued guidelines for further streamlining of schemes and projects. These changes, however, were not very effective in addressing the challenges as the key dimensions of community participation and coordination among intergovernmental stakeholders witnessed a minimal transformation.

Challenges of Community Participation and Sustainability of Initiatives

Though there was a paradigm shift from the technical watershed development programmes to that of the integrated watershed management programmes that focused on community participation and coordination among key stakeholders, these shifts were seldom operationalised on the field (Singh, 2017). Increasing institutionalisation of community and stakeholder engagement further alienated the most marginalised, and several studies identify the exclusion of the most vulnerable to the detriment of the overall project outcomes (Joshi et al., 2004; Joy et al., 2005; Kerr et al., 2002; Palanisami & Kumar, 2009; Rao, 2000). The inability of top-down projects in institutionalising community participation and ownership also resulted in the failure of the projects in the long run, the lack of ownership and poor maintenance of community assets created through various schemes and projects, and an overall mistrust and ressentiment towards development projects. Though there were occasional success stories in terms of assets created or improvement in water, soil, and biomass conservation, failures outnumbered such success stories. Moreover, most monitoring and evaluation exercises were input-oriented, focusing on assets created, such as the number of bunds, trenches, and CCTs built, or employment provided, rather than focusing on dimensions, such as inclusion, reduction in inequality, and enhanced well-being. The increasing emphasis on institutionalising the formal watershed management initiatives and the resultant institutional isomorphism pushed organisations at various levels to incorporate structural elements that externally legitimise rather than those based on efficiency, minimise inspection and evaluation, decouple their structural elements from activities, and create an aura of

confidence by relying on the good faith of their external and internal constituents. Thus, most CSOs were reduced to mere implementing bodies following very similar protocols and strategies. Such rolling out of universal schemes and programmes further widened the gap between the formal and informal institutions and stakeholders, with negative implications for innovation and the emergence of contextual approaches that bridged the current gaps.

The sustainability of the initiatives, as revealed by the case studies depends largely on the participation of the communities and their ownership of the actions undertaken. With communities participating as stakeholders and not just beneficiary, it ensures the long-lasting impacts and transformative changes that eventually may add up to building resilience. In the case of CSOs, for example, the communities through their participation helped in curbing any external dependency on funds that would have alternatively hampered the project outcomes. When interventions are derived from funds that are either allocated through government schemes or projects, it creates a dependency among the communities. Such interventions are prone to political changes that may lead to alterations or seizing off the schemes, thus, impacting the project activities and their impacts.

Challenges of Leadership

Leadership was identified as a solution to the previously elucidated challenges in the disaster discourse, more so in the past decade. In this subsection, we explore the challenges encountered by leaders in working around these issues towards facilitating transformative disaster resilience. We analyse the unique strengths and limitations of leaders in varied spheres with regard to their leadership practices, institutional embeddedness, networks, and stakeholder engagement. The four thematic sections in the book identify a range of factors that shape outcomes with regard to community ownership and coordination and integration of stakeholders. Depending on the context, sphere, and level at which the leaders operated, the leadership practices varied with differential outcomes. The background, approach, and network of leaders shaped processes and outcomes with regard to community ownership and coordination among stakeholders.

The individual leader focused upon in the first thematic section primarily relied on charisma, social identity, and a technical solution to the core issues that were pertinent to the communities. Whereas the public sector actors primarily relied on governance transitions strategies, available public resources, and piloted innovations with demonstrated efficacy, to roll out large-scale initiatives supported by existing or new institutional arrangements, policies, and guidelines. The leaders in the third thematic section primarily relied on a grassroots leadership approach mobilised around the values and principles that the initiative represented. The leaders in the fourth thematic section primarily contributed to institutional emergence and change to address the increasing frequency and intensity of disasters. They relied on their expertise, knowledge of the institutional arrangements and their current limitations, and the resources and power vested in them in the given position of the

institutional head. These leaders focused mainly on the grand framing/narrative, maintaining credibility and legitimacy of the organisation rather than the objective evaluation of outcomes achieved.

There are contradictions and outliers within each thematic section, which provides a nuanced understanding of leadership practices and their differential outcomes in varying context, spheres, and levels, as discussed in each of the sections. The individual and civil society initiatives had leaders (largely voluntary and informal in nature) who largely relied on contextual participatory approaches. However, the leadership in the first thematic section was individual-centric, and the sustenance of the initiatives relied on the routinisation of the leaders' charisma. Whereas in the civil society initiatives, included in the third thematic section, the leadership was decentralised, more in line with the shared and collective leadership approaches reviewed in earlier chapters. Thus, the sustenance of the initiative or the movement was not primarily dependent on charisma and/or other characteristics of the leaders but the extent of grassroots leadership that emerged among the groups, conscientised by the values and principles that the initiative represented. The emergence of grassroots leadership and community ownership required not just formal sensitisation and capacity-building programmes. The contextual framing of the issue, the prototypicality of the leader, the identification with the leader and the issues, the everyday significance of the issue, and the internalisation of values and principles guiding the initiative, among others, were instrumental in eliciting community ownership and participation. Often, there is a need to start with the conscientisation of the communities regarding their marginalisation and its implications for the everyday risks they encounter. Though buy-in from the community is very difficult, the case studies discussed in this book and especially this chapter show that work done in the main actors' respective villages has higher chances of gaining support and participation than if they are implemented in an area unfamiliar to them. This once again showcases the significance of grassroots leadership in the success and sustenance of the initiatives.

The individual and public sector leaders both primarily relied on the powers and resources vested in their official positions and were largely constrained by the institutional arrangement in which they were embedded. These actors were embedded within a network of economic, political, policy, and social actors with easy access to resources. However, the interventions mostly entailed the diffusion of innovation, with communities participating as beneficiaries in this leader-centric approach. The existing blueprints help in the implementation of the one-size-fits-all activities that are target-oriented and often create dependence on external support than ownership among stakeholders. Thus, their initiatives were mainly path-dependent governance transitions concerned with the large-scale rollout of demonstrated technical innovations emerging from other spheres or contexts. The challenges of community ownership were addressed through rules, guidelines, and policies. Very often, the communities were not among the stakeholders involved or were involved just as beneficiaries. The powers and resources vested in the position of institutional leaders ensured the institutionalisation of disaster management in

their respective organisations but were not transformatory in addressing the structural root causes contributing to the problems they addressed in the context of disasters. Thus, several challenges that existed before the institutionalisation of disaster management continued unaltered. The dominance of institutional processes over possibilities of institutional entrepreneurship, too, were evident in the public sector. The discontinuation, routinisation, or sidelining of institutional arrangements and projects, initiated during a leader's tenure, under the new leadership, in a setting dependent on career bureaucrats, was a major challenge in the success and sustenance of initiatives in the public sector.

Institutional embeddedness of leaders, thus, emerges as a significant theme in the study of leaders across spheres, contexts, and levels. The approach, values, and ethos of leadership are structured by the cultural ethos of the primary institutions and organisations that they are embedded in. The study does not negate the possibilities of leaders' agency and value orientation but demonstrates how larger institutional processes structure leadership practices. The contribution of the leader, nature of networks drawn upon, stakeholder engagement, and scale and sustenance of the initiatives were primarily structured by the primary institutions that the leader was embedded in. The value orientation of the leader and that of the institution and the reflexivity of the institutional arrangement to a large extent determined the transformatory contributions of the leader.

The scaling up of interventions can be either attributed to the expansion of activities undertaken and/or increasing number of communities benefitted or policy changes. The latter is less challenging to actors in power and established organisations, owing to enhanced availability and accessibility of resources, institutions, and structures favouring percolation into policies. For another set of actors, the scaling up has been observed either in terms of increasing membership or venturing into new geographies except a few that failed to move beyond their pilots. Such actors, to sustain their efforts and organisations, diverted from their parent activity to ones that provide assured funds. A lack of support and resources proved to be challenging to both the kinds of upscaling for the individual actor and civil society, and therefore, the actions failed to transform into policies for wider outreach and implementation.

The nature of networks and stakeholder engagement, too, were structured by the primary institutions that the leader was embedded in. Public sector actors primarily relied on public sector institutional arrangements to roll out and upscale their ideas. Even when other stakeholders were involved, it was primarily experts from the field and seldom the communities. Initiatives, such as *Dhara Vikas* and *Sabujayan*, were inclusive with regard to the engagement of various stakeholders; however, the role of communities was limited to that of the beneficiary. The individual and civil society actors drew from a wide network of actors; however, when it came to working with public sector actors for upscaling their initiatives, their role was primarily structured by the funders or public sector. The public sector mostly responded with institutional measures to address issues of community engagement and coordination, which often were alien to grassroots realities. Thus, NGOs and

individuals, who have tried a bottom-up approach to address locale- or region-specific issues, failed to make a mark when their ideas and projects are implemented at scale even though they follow a more participatory approach. Efforts were made to make the programmes and schemes more collaborative in approach, but at the implementation level, it was found that most were run and managed by one or a select few department(s).

Though the public sector initiatives were in a better position to bring about policy changes, these initiatives lacked the mechanism or institutional arrangement to enforce regulations, such as on cropping patterns and groundwater extraction. This was necessary to ensure the sustainability of the programmes that were initiated. In many projects, community mobilisation and participation were the driving forces of success. But as water availability increased, cropping patterns were changed to maximise incomes. These resulted in a reversal to unsustainable practices, like over-exploitation of the resources, which were recently restored. Although some of the programmes had a clear exit strategy, there was no mechanism for regular monitoring and evaluation. This made it extremely difficult to hold accountable the institutions responsible for the maintenance of the assets. Further, unless we address the demand side of the problem (regulating the cropping pattern and groundwater extraction), the capacities created under JSY or any similar programme will help only in the short term.

The Way Forward for Building Disaster Resilience in India

The key challenges emerging from the case studies presented earlier and the four thematic sections of the book are as follows: community engagement and ownership, collaboration and integration of key stakeholders, and the limitations of the institutional framework and arrangements that currently guide disaster resilience policy and action. Leadership is often looked upon as the solution to the previously identified challenges as illustrated in each of the thematic sections. We draw from the theoretical perspectives of integrative public leadership (Morse, 2010), critical new institutionalism (Cleaver, 2012), and comparative realisation focused approaches to social justice (Sen, 2011) to explore the possibilities and the way forward for disaster resilience leadership.

As disaster resilience is a complex (multidimensional, multisystem, multisectoral, and multilevel) phenomenon, no single actor would be inconsequential, while no single actor would be able to bring about holistic resilient transformation. The four thematic sections highlight the specific strengths and challenges encountered by leaders located across spheres at various levels in facilitating disaster resilience in their respective constituencies. Thus, recognising the synergistic relationship between actors and their actions, we draw from the theoretical perspectives of integrative public leadership in exploring possibilities and the way forward. Figure 10.2 captures the synergistic relationship between actors and their actions in various spheres at various levels with regard to facilitating disaster resilience. The range of leadership approaches and practices demonstrated by these actors is shaped

by the values and ethos of the predominant institutions that structure each sphere. For example, the initiatives of the individuals, collectives, and CSOs explored in this book highlight the grassroots leadership approach, conceptualised as 'leaderful' by Raelin (2003). Thus, each of these leadership approaches and practices draws from local knowledge, emerging from the social learnings of communities at risk. On similar lines, the leadership of formal actors is primarily governance transitions that draw from emerging technologies in the realm of both science and society. This often sidelines complex social relations and processes that often determines transformative outcomes on the ground.

The case studies examined in the book also highlight the nature of leadership practices by actors, top-down processes by individuals in power, and bottom-up processes, among those emerging from within the community. Top-down approaches are often paternalistic and generic, therefore, restrictive in terms of their goals and processes, whereas bottom-up approaches deviate from rigidities that exist within the formal structures and rely on grassroots leadership (Fois & Forino, 2014). While top-down approaches are driven by supply, bottom-up approaches are contextualised to the risks and demands and involve local participation, autonomy, ownership, and resources, both financial and human.

However, as these actors and their actions are synergistic, the earlier distinctions do not fit under perfect taxonomies or binaries juxtaposed to each other. Figure 10.2 also captures the interfaces between these actors in influencing, and being influenced by, policy processes that structure everyday discourses and practices. However, the influence of national and global formal institutional frameworks guiding disaster resilience policy and practice is predominant. Though individual

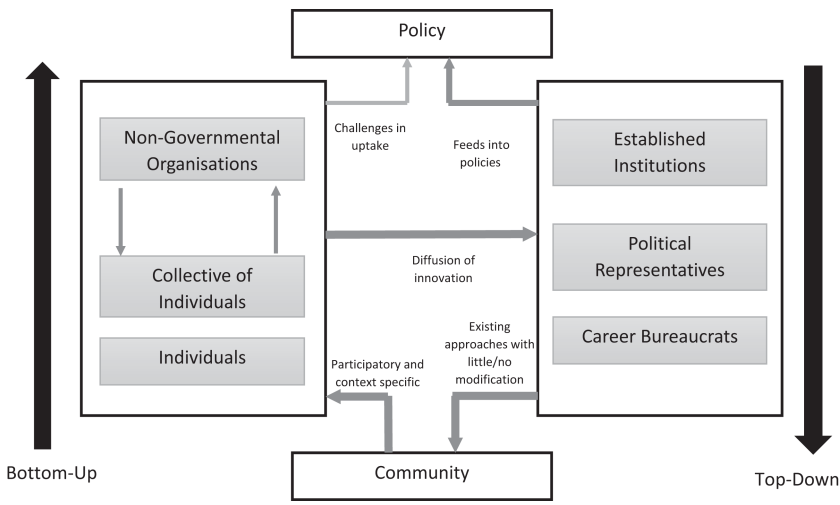


FIGURE 10.2 Synergistic Relationship between Actors and Their Actions for Building Disaster Resilience

actors, collectives, and CSOs do influence and, often, subversively negotiate the influences of these formal institutional frameworks, they are often too powerful in silencing the alternate discourse, approaches, and practices. Thus, we see the predominance of technical and professional CSOs in the field of disasters often emerging from the technical and scientific innovations of individual actors that assimilate the social learnings of communities living with risk in a particular context. But when these interventions are upscaled to alien geographies, they often fail to reproduce the initial success, unless they are owned and further contextualised by local/grassroots leadership. Thus, local/grassroots leadership becomes equally significant in translating the global transformative agenda into transformative outcomes for communities at risk.

Owing to the uncertainty associated with disasters along with challenges, such as limited time for action and lack of familiarity, building resilience to disasters requires inter- and intra-organisational collaborations between formal and informal institutions (Noran, 2014). Disaster offers a window of opportunity for these organisations to establish a mechanism to envisage change (Birkmann et al., 2010). Kalkman and de Waard (2017) postulate that such collaborations function within a trust-control nexus, such that the nature of the relationship between the two or more constructs require a balance between the mechanism of organisational structure, formalisation and hierarchy, shared values, and integrity. Imbalance in these structures may lead to jurisdictional disagreements and domain conflicts and, therefore, diffusion of authority while dealing with disasters. Thus, the management of disaster involves collective decision-making, involving a multitude of actors paying attention to the distribution of power, leadership, and coordination (CRED, 2015).

As the state is one of the most dominant actors in the pursuit of public good concerning disaster risk reduction and management, the integrative public leadership framework emerges as a possibility for future disaster resilience initiatives of the state. With the shift from an industrial society to a knowledge society, there has been a change from traditional hierarchically oriented governance to that of market- (new public management framework) and network-oriented governance. Within the current network-oriented governance frameworks, there is an emphasis on the integration of multiple stakeholders' (actors and organisation) ideas, visions, purpose, knowledge, abilities, perspectives, resources, and practices towards the creation of public value. Integrative public leadership emerges from the network-oriented governance framework and "is a process of developing partnerships across organizational, sectoral and/or jurisdictional boundaries that create public value" (Morse, 2010, p. 231). It is considered a catalyst for the successful integration of various stakeholders. The integrative public leadership framework envisages not only multistakeholder engagement but co-creation of possibilities towards disaster risk reduction and management. Thus, it creates space for plural interests and knowledge systems to coexist and influence each other towards the emergence of contextual disaster resilience initiatives. Thus, it emerges as a possible antidote to the rigidities of institutionalisation and universal standardised strategies towards building disaster resilience in varied contexts.

Though disaster risk reduction and management initiatives are predominantly structured around principles of public good, a reorientation of the core values that guide policy and practices is quintessential in moving towards transformative disaster resilience initiatives. To address the uncertainty and risks amidst competing forces of modernity, risk society, neoliberalism, and governmentality, leadership needs to focus on public good, values, and ethics (Crosweller & Tschakert, 2020). A reorientation of disaster resilience leadership practices around questions of social and environmental justice is indispensable in the current context of increasing inequality and disparity. Thus, the disaster resilience discourse and practice cannot disassociate itself from the structures and dynamic pressures that contribute to the root causes of disaster vulnerability and risk among the most marginalised sections of society. Hence, the convergence of key stakeholders beyond the principle of public good, over values of addressing structural inequalities, becomes key in addressing disaster risk and facilitating resilience in the Indian context.

In the recent past, there has been a recognition of the need to address structural inequalities and poverty to reduce disaster risk (Hillier & Castillo, 2013; Shepherd et al., 2013; UNISDR, 2008). However, the engagement of disaster researchers and practitioners with issues of structural inequality and injustice is primarily limited to developing theoretical frameworks and procedural guidelines, such as that of the framework for just recovery, principles of justice, humanitarian accountability partnership standard in accountability and quality management, and the sphere handbook, among others (Azadegan, 2018; Jerolleman, 2019; Tafti & Tomlinson, 2019; Humanitarian Accountability Partnership, 2010; Sphere, 2018). The mainstream disaster discourse is, thus, preoccupied with procedural aspects of operationalising justice with a sole focus on formal humanitarian and bureaucratic actors. Therefore, to bring about transformative resilience, the current reliance on transcendental institutional approaches or procedural aspects to addressing issues of structural inequalities needs to be combined or replaced with comparative realisation focused approaches to structural inequalities and injustice (Sen, 2011). Thus, apart from engaging with ideal conceptions of institutions, guidelines, and policies, every leader in various spheres at all levels needs to look for the next best alternative (if not the ideal) in addressing everyday inequalities that they encounter in their world of practice. This reorientation towards actualising distributive justice would set the base for meaningful social innovations that are contextual and cognisant of grassroots social relations and processes.

While formal actors can provide strategic guidance and financial resources, the risks associated with routine and non-routine events juxtaposed with structural inequalities require the engagement of local formal and informal institutions. Drawing from the theoretical perspectives of critical new institutionalism, we propose the integration of formal and informal institutions across key sectors in line with conceptions, such as hybrid institutions (Booth, 2012), institutional blending (Hodge & Adams, 2012), and institutional contextualism (Lejano & Shankar, 2013), among others. These new institutional arrangements emerging from the institutional bricolage approach (Cleaver, 2012) are envisaged to, bring together the

modern professional standards or scientific criteria and the local cultural borrowings, recognise the influence of the socio-physical context on original blueprints of institutions and its processes, and understand the reactions of certain social groups to institutional designs and address issues of exclusion.

The reorientation of disaster resilience leadership that would facilitate grassroots leadership, integration of key stakeholders around the values of public good and social justice, contextualisation of institutional arrangements by drawing from all forms of knowledge, and the bridging together of formal and informal institutions, would enhance community engagement and ownership of grassroots initiatives to build disaster resilience. Thus, the decentralised interventions to build disaster resilience would concur with developmental needs, especially that of the most marginalised in the given context; include all socio-economic groups; and internalise the local knowledge (Samaddar et al., 2015) with adequate support from formal structures and institutions to avoid unsavoury results (Cretney, 2016). Thus, to achieve resilience, the leadership practices need to cater to the needs of the community, appreciate the values and visions of the community, and integrate into institutional practices its values, methods, and aims.

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