Resilience

Moving beyond surviving climate disasters to supporting communities to thrive

A catalytic role for philanthropy to centre communities as agents of resilience building

ROHINI NILEKANI philanthropies

Dalberg

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❝ Introduction from Rohini Nilekani

A flood does not arrive as an "event" in the lives of people who live beside a restless river; it arrives as a season, a memory, and sometimes, as a quiet dread. Heat is not just about the peak days of summer anymore. Unbearable heat can extend across months, with no respite even at night, because temperatures remain too high for the body to heal.

For many communities across India - on the coastlines, in the floodplains, in the mountains, and in our expanding heat-stressed cities - climate disasters are no longer exceptional disruptions but part of everyday reality.

At Rohini Nilekani Philanthropies (RNP), we commissioned this report hoping that we, the people of India can shift from our earlier mental model on climate-related events and disasters. Because a great shift is happening on the ground.

India has, to its credit, built a formidable disaster response capability over the last two decades - saving lives through early evacuations, stronger institutions, and faster relief. And yet, as this report shows, just saving lives is no longer enough, because repeated disasters now overlap with recovery, shrink the time people have to rebuild their assets and their lives, and steadily erode livelihoods, health, education, and dignity, especially for those already pushed to the margins. With nearly 85% of districts exposed to at least one of floods, droughts, or cyclones, and extreme weather occurring with alarming frequency, we are living in what the report calls a "new normal" that demands new thinking.

In this new normal, the state - the sarkaar at all levels - will remain indispensable. There is no substitute for public legitimacy, scale, and systems. But the first mile is where samaaj networks step in - neighbours, women's collectives, local volunteers, community institutions, and civil society organisations that move quickly, translate warnings into action, and keep recovery from collapsing into abandonment.

This report offers a first-of-its-kind, samaaj-centric understanding of what rooted, grounded networks can do: how resilience is shaped in the everyday through trust, relationships, local leadership, and community decision-making, and how these strengths can be recognised and supported rather than treated as incidental.

Much of our current attention - political, financial, and media - peaks at the moment of impact and then falls away, even though it can take years for households to recover, if they recover at all. First responders tell me it is harder now even to raise funds after floods and cyclones, especially in remote areas where media attention is low. People already feel disaster aid fatigue, just when we need empathy to ramp up most.

We hope this report will nudge our sympathy chords again. We know that vulnerable populations – the elderly, women, and children are affected the most, that Dalits and gender minorities suffer structural discrimination post-disasters. We read here that for some disaster-affected households, recovery from economic losses can take up to 19 years, an impossible horizon when shocks recur and stack.

If we continue to invest primarily in response, we will remain trapped in an exhausting cycle of relief; what we need instead is an imagination of longer-term resilience, where communities are not passive recipients of aid, but architects of how they adapt, rebuild, and secure their futures with agency, equity, and dignity. This point cannot be overemphasized. Contextual, locally-led preventive action, clearly understood roles and responsibilities when disaster does strike, and a hopeful road map for recovery are essential.

That is why this report is also, importantly, an offering of hope: it provides a rigorous, people-first understanding of disaster resilience in the wake of climate risk, while showing the possibility of building back better together- across communities, civil society, government, and markets. What inspires me the most is how many innovative ideas have already been tested and deployed successfully, whether it is parametric insurance, disaster wallets, locally driven natural resource stewardship or pre-pooled funding. These are designs for resilience with dignity.

The report reframes resilience not as a technocratic checklist, but as a living construct built through the exchange and strengthening of physical, financial, human, natural, and social capital- especially social capital, so often overlooked and yet so central to survival and renewal. It asks us to measure success not only by how fast systems bounce back, but by whether people recover equitably, whether dignity is protected, and whether the next shock finds communities with more choice, not less.

This is where philanthropy, and especially patient, flexible capital, has a catalytic role to play. For funders, Corporate Social Responsibility (CSR) leaders, and institutional givers, the invitation here is practical and urgent: move beyond episodic generosity after headline

disasters, toward sustained investments that strengthen local institutions, social protection access, inclusive early warning translation, psychosocial support, and community-led planning. For climate and development practitioners, this is a shared agenda, because climate shocks are now actively unravelling development gains in health, education, livelihoods, and equity, and because resilience is not "one more sector" but a lens through which every sector must now work.

If this report does one vital thing, it is to re-centre the question from "How fast did systems bounce back?" to *"Did people recover with dignity, and can they face the next shock with more choice, not less?"*

We hope this work will help shift our collective focus from managing disasters to safeguarding futures with dignity. We hope it will strengthen the conviction that a resilient India will be built not only by stronger infrastructure and faster response, but by a stronger, resourceful and more compassionate samaaj, ably supported by both bazaar and sarkaar. As we discovered during the pandemic, we really are in this together. And what we do together really matters.

Rohini Nilekani
Chairperson,
Rohini Nilekani Philanthropies

Executive Summary

The new climate normal

Climate disasters are becoming the defining crisis of our time. Across India, millions of people now live with a new climate reality: disasters are no longer exceptional events but a persistent feature of daily life. India has made remarkable strides in saving lives, but survival alone is no longer enough. Climate disasters are eroding savings, disrupting education, destroying livelihoods, and trapping vulnerable communities in cycles of loss. Back to back disasters leave no time for households to recover. The message from the ground is clear: we must move from reactive relief to proactive resilience building—and this resilience must be built with communities, not for them.

The scale of climate disasters is staggering.

85% — of districts are exposed to floods, droughts, or cyclones.

86% — of days in 2023 experienced an extreme weather event.

>1.8 million — hectares of cropland damaged in 2023 due to climate disasters.

> 80,000 — houses damaged or destroyed due to climate disasters in 2023.

USD 12 billion — is the currently estimated annual economic losses due to climate disasters. This is set to increase manifold as climate disasters increase in frequency and severity.

The disaster patterns have changed.

40% — of districts have experienced hazard-type reversals—flood-prone areas turning drought-prone and vice versa.

>3 — annual inundations or flood events in villages that previously faced annual floods once a year.

The consequences affect marginalized groups the most.

14x — higher mortality risk for women and children compared to men

20-25% — jump in school absenteeism due to climate disasters resulting in significant learning loss

85% — extent of annual income that poor households can lose from a single disaster event

19 years — years is the estimated time to recovery for poor households from a major climate shock

Exhibit 1: Comparison of near future and far future risk of severe fluvial flooding in India
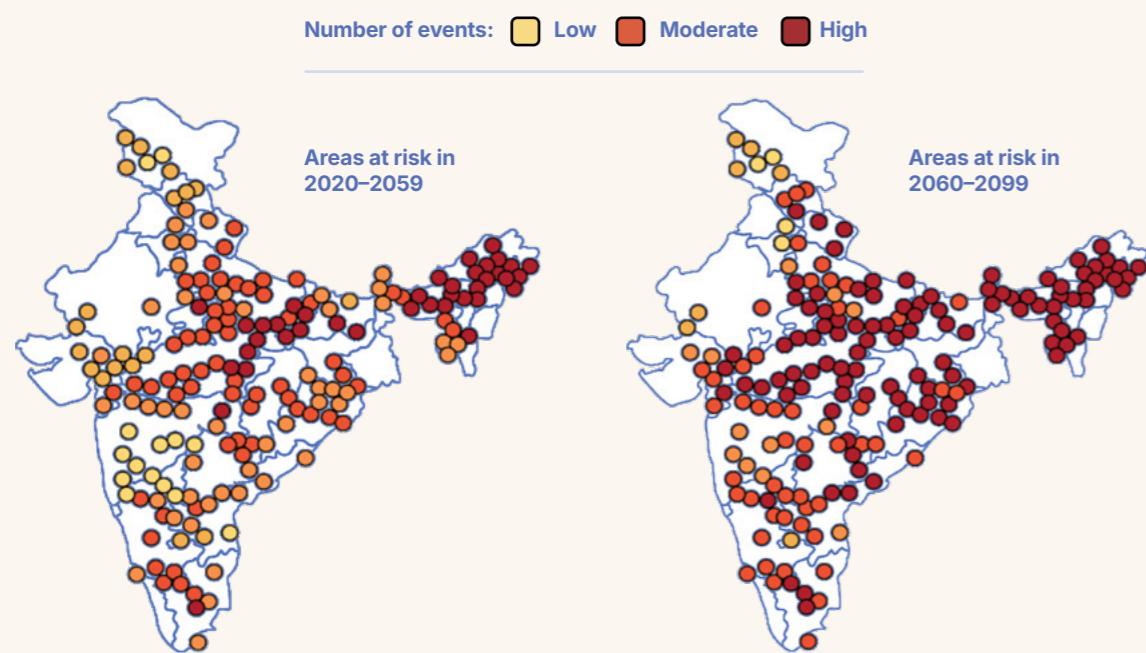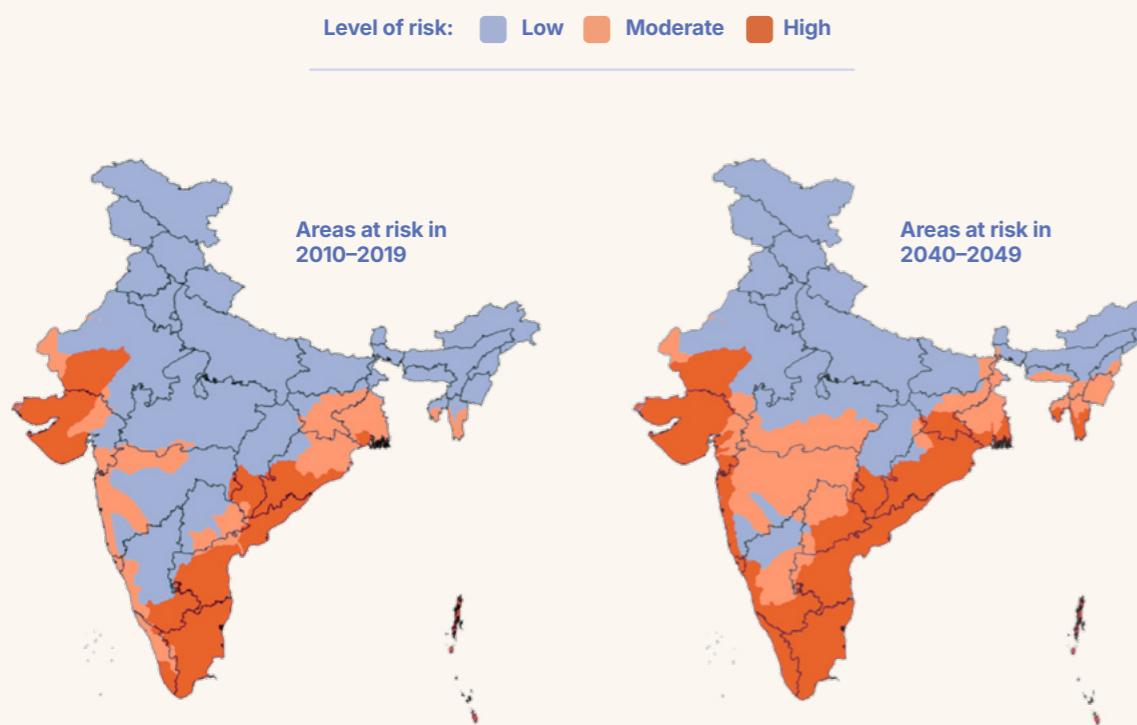
Number of events: Low   Moderate   High

Areas at risk in 2020–2059

Areas at risk in 2060–2099

Exhibit 2: Comparison of current and future risk of category 3 cyclones in India

Level of risk: Low   Moderate   High

Areas at risk in 2010–2019

Areas at risk in 2040–2049

Why community centric resilience must be the focus

USD 1 invested in disaster risk reduction and early action can save up to USD 15 in future disaster losses and costs.

Investing in building climate disaster resilience is sound investment. It can not only save lives and economic shocks in future, but also safeguard developmental gains that have been made over the past decade. However, such resilience cannot be built top down.

Community agency and voice must become a part of the resilience building process.

- Communities hold deep knowledge of local geography and hazards.

- They are first responders with neighbours and kin acting long before formal aid arrives.

- They possess inherited resilience mechanisms and knowledge: disaster resilient housing, seed banks, water systems, and local topography that can help build resilience.

- They are present between disasters, recovering from previous disasters and preparing for the next one, even when institutional attention fades.

Yet current approaches treat communities as recipients, not architects.

- Solutions are often standardized, not contextual.

- Success is measured by system recovery, not people's recovery.

- Marginalized voices—women, dalits, persons with disabilities—are excluded from planning.

Among practitioners, many valid entry points to resilience building exist. Some approach it through livelihoods and economic security; others focus on technology and data systems, or on restoring natural ecosystems like mangroves and wetlands; still others emphasize mobilizing philanthropy or strengthening local governance. These perspectives differ in emphasis, but they converge on one foundational insight: resilience must be built with communities, not for them. Communities understand their risks, hold the relationships that sustain collective action, and remain present long after external attention fades.

What communities need to build resilience

Community disaster resilience building requires a shift away from treating communities as passive recipients of aid and recognizing them as first responders, stewards of local knowledge, and the most adaptive actor in the system.

Such resilience building rooted in community agency, adaptability, equity, and dignity, is more sustainable, more responsive to local realities, and more capable of evolving as risks change. This is outlined in the figure below.

Exhibit 3: A community centric framework for resilience building

Preparedness

Disaster Response

Data and information systems

Policy and financing mechanisms

Physical capital

Financial capital

Natural capital

Community-centric disaster resilience

Human capital

Social capital

Community agency and capacity

Narratives

Mitigation & adaptation

Recovery

Samaaj	Sarkaar	Bazaar
• Civil Society Organizations and NGOs	• NDMA and SDMA	• Corporations (e.g., financial institutions, telecom companies)
• Philanthropies	• NDRF and SDRF	• Startups
• CSR Funders	• Line departments (Health, Water, Roads and Public Works, etc.)	• Private funders and impact investors
• Media Organizations	• Local government (District Administration, Police)	

In essence, for communities to become resilient, five forms of capital that most communities possess in some form, must be strengthened:

▶ **Physical Capital —** Infrastructure that protects lives and livelihoods before, during, and after disasters.

▶ **Financial Capital —** Savings and financial buffers to absorb shocks and rebuild lives.

▶ **Human Capital —** to plan, mobilize, and adapt to climate disasters and leverage local and external knowledge to create resilience solutions

▶ **Social Capital —** Trust networks and community institutions that activate in crisis and serve to provide evacuation, relief, resources, and other forms of support

▶ **Natural Capital —** Ecosystems that buffer hazards and sustain livelihoods.

These capitals interact. When one fails, others compensate. Resilience emerges from strengthening all five.

This view is fundamentally different from historically adopted disaster response approaches. Disaster response mechanisms adopt a very top-down approach of building these five forms of capital, prioritize lives saved as a metric, are formulaic in their approach to assigning aid and resources, and have limited focus on vital but important aspects of resilience building such as social capital. The exhibit below illustrates the difference.

Exhibit 4: Community disaster resilience is fundamentally different from disaster response in how it centers communities

	Disaster response	Disaster resilience
Physical capital	Focus on rebuilding damaged essential infrastructure and housing post-disaster to resume normalcy	Adaptation and mitigation measures actively safeguard assets that are vital to communities, with a focus on building back stronger
Economic and Financial capital	Financial support to communities is largely centered on post-disaster compensation which often flows slowly and unevenly	Communities have access to multiple financial buffers like pre-emptive cash transfers, microinsurance, etc., and are integrating diversified (resilient) livelihoods.
Human capital	Communities viewed largely as beneficiaries of aid rather than agents of recovery.	People seen as drivers of change - trained, skilled, and informed to anticipate and adapt to risks. Local leadership, indigenous knowledge, and traditional practices are recognized and integrated into planning, education, and preparedness systems.
Social capital	Social capital tends to operate at an informal level, driven by individual networks rather than structured or institutionalized community mechanisms	Resilience built through strong local networks and mutual aid systems facilitated by solutions that allow access to these networks in times of disasters
Natural capital	Environmental restoration treated as secondary to rebuilding infrastructure. Short-term exploitation of natural resources to meet relief needs	Ecosystem protection seen as core to resilience—mangroves, wetlands, and forests valued as natural buffers. Communities steward and co-manage ecosystems, linking environmental health with livelihood security.

Why must philanthropy care for this shift?
For funders, climate disasters are no longer a distant concern—they are an immediate threat to impact. Floods shut down schools and disrupt immunization drives. Droughts push families into debt and pull children out of classrooms. Repeated shocks erode the very foundations that philanthropic investments seek to build. In the new climate normal, resilience is not a separate sector—it is a precondition for sustaining progress across all sectors. And the most prominent way to do so in the new climate normal is to centre the role of communities as stewards of their own resilience.

Three types of failures holding India back

Despite proven models, community-centric resilience has not scaled. Three failures explain why.

1. Attention Failure: Success is measured by lives saved; slow-onset disasters, long-term recovery, and marginalized groups remain invisible to systems and funders.

2. Design Failure: Disaster systems built for rare, large-scale events cannot respond to frequent, overlapping, hyperlocal disasters—and funding arrives too late, too rigid, too standardized.

3. Relational Failure: Coordination between government, CSOs, and communities remains episodic and transactional; participation structures exist on paper but not in practice.

Ten ideas for philanthropy

Addressing the challenge of building climate disaster resilience requires philanthropies to act on two fronts. First, it requires dedicated investment in building resilience directly — strengthening community capacities, piloting innovative financing mechanisms, creating early warning systems that work for the last mile, and nurturing the civil society organizations that do this work. Second, it requires philanthropies across sectors to embed resilience as a lens within their existing portfolios, ensuring that investments in education, health, and livelihoods can withstand and adapt to climate shocks. We provide below ten ideas that philanthropies across the country can prioritize.

Pathway 1: Building Resilience Directly

S.No.	Potential solutions	Examples from the field
1	**Drive community-led planning:** Fund village disaster committees, scenario planning, and trained response teams.	**Poorvanchal Grameen Vikas Sansthan (PGVS)** supports rural communities in Uttar Pradesh to organize themselves into specialized teams that are trained to undertake disaster scenario planning, as well as mobilize and lead relief operations.
2	**Build household financial buffers:** Pilot parametric insurance, community savings, and rapid-disbursement funds.	**SEEDS** is piloting a pooled disaster risk fund in Cuddalore, Tamil Nadu. The fund deploys pre-positioned funding raised from philanthropies and CSR actors that gets deployed with climate disaster triggers. This supports rapid fund availability for communities, while ensuring transparent implementation and monitoring.
3	Make early warnings actionable: Translate technical forecasts into impact-based guidance through trusted channels.	**Caritas India** is facilitating transboundary flood collaboration across India and Nepal where community members are trained to collect and share water level data using locally installed and maintained sensors with their downstream counterparts. This information is shared via text messages and phone calls, thereby providing a window for proactive action.
4	**Shift the narrative:** Enable communities to document invisible hazards and advocate for recognition.	**ASAR** is working in flood-affected districts of Ernakulam, Kerala to help residents recognize the impact of tidal flooding. It is engaging local community members—including Kudumbashree, ASHA, and MGNREGA workers—to systematically document flooding data on ward-level calendars. By tracking the growing extent of flooding, communities are able to better understand the risks and advocate for stronger preparedness measures.

S.No.	Potential solutions	Examples from the field
5	**Create shared data infrastructure:** Fund open-source platforms integrating hazard, vulnerability, and community data.	**Platform for Real-time Impact and Situation Monitoring (PRISM)** is a digital public good that integrates geospatial hazard data such as floods, storms, droughts, and earthquakes with socioeconomic vulnerability metrics to generate actionable, evidence-based insights for rapid decision-making. Its integration of diverse datasets can support scenario building, and targeted planning.
6	**Enable community resource exchange:** Support digital tools for self-reporting needs and coordinating mutual aid.	**PetaBencana** is a community-powered digital platform where individuals can self-report their needs during disaster crises that are then mapped in real time on a public platform. This information is accessible to local citizens, allowing them to quickly match urgent needs with available resources. The platform also tracks and facilitates the borrowing and returning of essential items thereby creating a rotating pool of lifesaving assets.
7	**Invest in CSOs for the long term:** Provide multi-year core funding and create practitioner learning networks.	**Asian Cities Climate Change Resilience Network (ACCCRN)** supported the creation of a network across several cities to learn from each other and adopt strategies for improving urban climate change resilience.

Pathway 2: Embedding Resilience Across Sectors

S.No.	Potential solutions	Examples from the field
8	**Restore services when disasters strike:** Pre-commit funding to restore education, health, and nutrition post-disaster.	**UNICEF** and other actors supported local CSOs in the North East region to restore learning spaces and activities in flood relief camps that helped continue learning and also provide spaces for children to cope with the disaster event.
9	**Embed resilience in sectoral strategy:** Integrate climate adaptation into existing portfolios—school safety, livelihood training.	**Watershed Organization Trust (WOTR)** is working with rural communities and farmers to expand livelihood opportunities while also integrating an ecosystem based adaptation approach that strengthens degraded ecosystems and helps communities build long term climate resilience.
10	**Strengthen frontline institutions:** Equip schools, Anganwadi, and health facilities as resilience anchors.	**UNICEF** supported the training of master trainers and female frontline workers in Kerala to provide health support to infants and mothers who have young children during disaster linked emergencies.

Exhibit 5: Non-exhaustive list of some other examples of Samaaj led resilience innovation pilots in India

Parametric heat insurance for informal women workers in Gujarat: SEWA piloted a heat insurance scheme in 2023 that triggered automatic payouts when extreme heat (40°C) persisted for two consecutive days.

Impact: The initiative expanded from 21,000 women in five districts of Gujarat in 2023 to 50,000 across 22 districts in 3 states in 2024.

Community-led disaster response in Eastern Uttar Pradesh: PGVS built Village Disaster Management Committees that led search, rescue, and evacuation during floods. Through regular drills and clear roles, communities acted swiftly and independently when early warnings are issued.

Impact: Across 95 villages, no flood-related fatalities were reported, highlighting the effectiveness of local ownership and training in disaster response.

Transboundary flood early warning between India and Nepal: Caritas India is fostering real-time flood collaboration by linking riverine communities across both countries through locally maintained water sensors and direct alerts.

Locally Driven Natural Resource Stewardship: WOTR works with rainfed villages across central and western India to promote community-led water conservation through traditional watershed practices, training villagers to self-manage shared water resources via village water committees.

Akshvi by SEEDS, a decentralized e-disaster wallet: The platform enables disaster-affected households to self-report their losses every time they are faced with an incident. Data is validated through AI and community volunteers, creating transparent household-level loss records for shaping policies.

Impact: A pilot across six flood-affected districts in West Bengal saw over 2,300 families self-report cyclone-related losses, with a 98% verification success rate of the reported data.

Community mapping of tidal flooding in Kerala: ASAR and Equinoct helped communities in Ernakulam to document tidal flooding by creating maps highlighting high impact areas and capturing videographic evidence.

Impact: Their advocacy led to official recognition of tidal flooding as a disaster and the allocation of public funds for mitigation and compensation.

Parametric insurance for coastal workers: SEEDS, in partnership with the Tamil Nadu Consumer Education and Development Foundation (TAMCED), is testing a parametric insurance pilot for cyclone-affected household Chidambaram Taluk, Cuddalore.

Implementing these ideas requires capital that only philanthropy can provide: capital that stays engaged between disasters; patient capital that is willing to fund innovations; convening capital that brings fragmented actors around shared learnings and agendas; and relational capital to make trust-based investment in community capacities and civic muscle.

⚙ Methodology

We adopted a three-pronged approach to understand the current state of disaster resilience, unpack the lived realities of vulnerable communities, examine the narratives shaping their lives, and identify actionable opportunities for civil society actors and philanthropies to lead efforts in strengthening the disaster ecosystem. This included:

▶ **Extensive desk research** to synthesise the best available evidence on India's disaster resilience landscape, the multifaceted impacts of disasters across communities and individuals of marginalized identities, and successful global and Indian examples of innovations in resilience-building.

▶ **Field visits** to flood-prone districts in Assam and drought-prone areas in Maharashtra to understand firsthand the experiences of vulnerable communities, identify gaps in disaster risk reduction (DRR), and assess the relational capacities of different stakeholders on the ground.

▶ **Learning circles and one-on-one interviews with leading experts and practitioners** to deepen insights on the impacts of disasters, explore the systemic drivers and ecosystem gaps shaping resilience in India, understand ongoing innovation efforts, and identify actions needed to strengthen community agency and collective resilience.

Desk research and field visits		Learning circles and expert discussions	
Extensive desk research to understand the current landscape of disaster management in India.	2 field visits – one in a flood-prone region and the other in a drought-prone region to understand on-ground realities.	2 learning circles with experts and practitioners to understand vulnerable communities' lived experience, identify key gaps in the ecosystem and brainstorm resilience solutions.	15+ one-on-one conversations with experts to capture diverse viewpoints on resilience, how it should be approached/ built, gaps in ecosystem, potential role of philanthropy, etc.

While we have attempted to present a nuanced view of the community centric resilience approach that is needed in the new climate normal and the role that philanthropies can play, there are a few methodological limitations:

- The report anchors primarily on insights and inputs shared by practitioners and experts. While we strived to engage multiple voices and experts who have been at the forefront of climate disaster resilience and climate action, other perspectives may also exist.

- The Samaaj led climate disaster resilience innovations and approaches (presented in chapter 3) are non exhaustive. They are based on desk research and inputs received during our consultations but many other examples may exist. These are intended to serve as inspiration and not as a comprehensive landscape.

- The research and findings in the report provide a high level and national view. It does not capture a subnational view though disaster profiles and socio-economic realities differ from state to state and even at more granular levels. Our approach to community centric resilience presented in the report is intended to support hyperlocal action but the data provides a national picture.

⭐ Acknowledgements

Vikrant Mahajan,
CEO,
Sphere India

Nihal Ranjit,
Senior Associate,
Indian Institute for Human Settlements

Bhargav Krishna,
Convenor,
Sustainable Futures Collaborative

Luit Goswami,
Director,
Rural Volunteers Centre (RVC)

Nani Kumar Saikia,
Executive Director,
SATRA

Pranav Sethi,
Climate and Disaster Risk Mitigation
Specialist,
GeoHazards Society

Girish Chandra Mishra,
Mission Head – Livelihoods & Resilience,
HelpAge India

Eklabya Sharma,
Strategic Advisor,
Ashoka Trust for Research in Ecology
and the Environment (ATREE)

Kuldeep Dantewadia,
Co-Founder and CEO,
Reap Benefit

Sathia Chakrapani,
Research Manager,
Inclusion Economics Centre India

Amita Pathria,
Technical Specialist – Sanitation, Policy &
Technical Support
WaterAid India

Nirat Bhatnagar
Founder,
Belongg & The Atlas of Behavior
Change In Development

We are also grateful to the ClimateAi
team for allowing us the use of disaster
event projection maps built by them using
proprietary data and algorithms that provide
a glimpse of the expected increase in
frequency and intensity of climate disasters
in India over the coming decades.

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The New Normal

Why survival is no longer enough

🔥 Climate disasters in India are no longer isolated crises – they represent a "new normal" and are becoming a prominent force reshaping lives and livelihoods across much of the country.

From the Himalayas to the coastline, almost every region of India now faces climate-related disasters. Nearly 85% of districts are now exposed to at least one of three major hazards—floods, droughts, or cyclones.[1] Approximately 12% of India's land area, including the Indo-Gangetic-Brahmaputra plain, is prone to floods and river erosion; 76% of its coastline faces cyclone risks; 68% of cultivable land, predominantly peninsular and western India, is drought-prone; and 15% of the mountainous landmass is vulnerable to landslides.[2] Low-lying river basins, coastal belts, and mountain ecosystems are emerging as chronic disaster hotspots, where climate stress combined with geological fragility compounds existing vulnerabilities of populations living in these areas. For example, the Himalayas exhibited more glacial lake outburst floods (GLOF) events than any other mountainous area with a frequency of 1.3 GLOFs per year over the last four decades.[3]

Deepening climate volatility has resulted in climate disasters no longer being exceptional events or rare disruptions, but everyday realities. Between January and September 2023, India witnessed extreme weather events on 86% of days, an almost 25% increase in extreme weather events since 2005.[4] These events claimed nearly 3000 lives, impacted over 1.8 million hectares of cropland, and damaged more than 80,000 houses.[5] India now faces a future in which extreme weather is not an exception but a defining feature of daily life and a critical factor shaping the country's developmental trajectory.[6]

Further, communities are now contending with disasters they were not exposed to or greater frequency of climate-linked disasters. In many regions, villages that once experienced annual floods now face three or more inundations yearly. 40% of Indian districts have even witnessed hazard type reversals, where flood-prone areas are now drought-prone and vice versa.[7] In states like Assam, Uttarakhand, and Odisha, disasters now strike back-to-back, with landslides following floods, and droughts often following cyclones – leaving little time for recovery.

Climate models suggest that the intensity of these disasters will escalate in the future. Rising temperatures and corresponding changes in weather cycles are expected to worsen the disaster landscape of the country. Heavy rainfall is projected to increase over the western and Gangetic river basins by ~14%, resulting in a higher probability of floods (see Figure 1).[8] The area in India affected by severe drought is expected to increase by 150% by the end of the 21st century.[9] In the North Indian Ocean, the intensity of the cyclone is projected to increase by ~5% by 2040–49, which will increasingly affect inland areas and non-coastal states (see Figure 2).

Together, these trends tell a clear story: India has entered a state where disasters strike often, with limited warning, and where disasters and recovery overlap continuously, i.e., a state where "disasters are the new normal".

Figure 1: Comparison of near-future and far-future risk of severe fluvial flooding in India[10]

Number of events: Low Moderate High

Areas at risk in 2020–2059

Areas at risk in 2060–2099
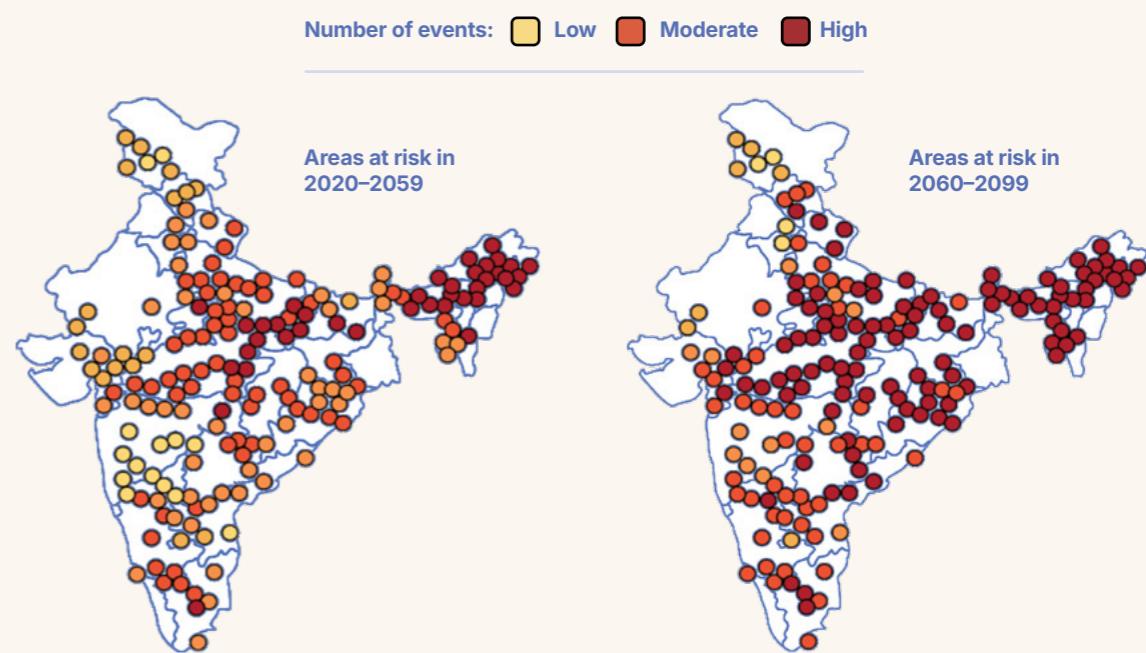
Figure 2: Comparison of current and future risk of category 3 cyclones in India[11]

Level of risk: Low Moderate High

Areas at risk in 2010–2019

Areas at risk in 2040–2049
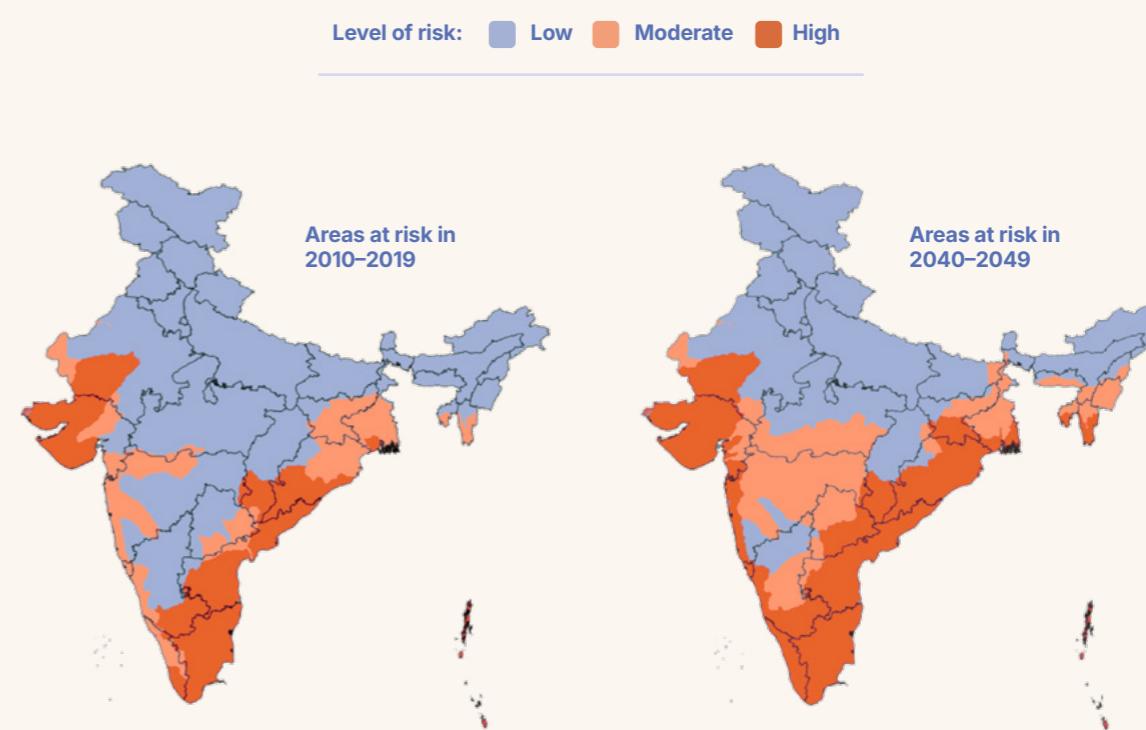
For policymakers and development actors working on health, education, livelihoods, or gender, the new normal carries a direct implication: hard-won developmental and economic gains are being undone, and without a shift towards building climate disaster resilience, developmental progress will be at risk.

The economic consequences of these compounding disasters are severe. In 2023 alone, natural disasters resulted in significant economic losses approaching USD 12 billion for the country.[12] Without decisive action to strengthen resilience and adaptation, these annual costs could reach several hundred billion USD by 2050. For instance, estimates suggest that flooding and cyclones alone could result in USD 30 billion in annual losses by 2050 if protection measures remain inadequate.[13] These losses spread across destroyed infrastructure (e.g., housing), crop or livelihood asset loss (e.g., livestock), and lost natural capital (e.g., tree cover). Funds required to power India's development may not be enough to deliver and sustain these outcomes as climate disasters continually erode progress made. Increasingly, these funds may need to be diverted to emergency relief unless community resilience is built to weather, recover, and grow in spite of these disasters.

Beyond economic shocks, disasters are already unraveling hard-won development gains. Climate disasters have far-reaching consequences, beyond lives lost and economic losses, unravelling the progress made in sectors like education, health, and equity:

▶ **Education:** Floods and cyclones routinely shut down schools, which are also often turned into shelters. Roads leading from communities to schools become impassable, and learning materials are destroyed, leading to prolonged interruptions in education. School closures can last from 2 weeks to six weeks due to flood events.[14] Other disasters impact children's ability to attend school. For example, in drought-prone areas, about 20-25% of school absenteeism can be attributed to children fetching water or looking after livestock.[15] For many low-income households, these disruptions are often permanent, with children dropping out to help their families cope and recover. Evidence suggests that prolonged school closures in disaster-prone regions, and ensuing migration or economic distress, increase the risk of child marriage and child labour.[16]

▶ **Healthcare:** Disasters damage health facilities, disrupt medical supply chains, and interrupt essential health services. A study found that by 2050, over 5,500 health facilities in Maharashtra alone will be at significant risk from floods and cyclones[17]. Such disruptions halt critical programmes—including immunization drives, nutritional supplementation, and maternal and child health services—and strain logistics like vaccine cold chains and medicine distribution. For example, in Kolhapur district, climate-linked disruptions delayed vaccinations and worsened malnutrition among infants.[18] Maharashtra subsequently reported 2,692 measles cases in 2022—the highest in India and an eightfold increase from the previous year, highlighting how disaster-induced service interruptions directly translate into poor health outcomes[18].

▶ **Gender:** Women and girls bear the heaviest burden of climate disaster crises. The loss of male employment during disasters is frequently a trigger for heightened levels of gender-based violence within households and communities. Studies from Indian states that were impacted by the 2004 tsunami, which is not a climate-induced disaster, noted a ~1.5-2x increase in probability of intimate partner violence in the aftermath of the disaster.[19] This probability was especially high for women and girls belonging to lower economic classes or disadvantaged caste groups. Similar vulnerabilities have been observed for women and girls living in regions exposed to climate - linked disasters such as drought.[20] Displacement and migration driven by disasters force women and girls into unsafe settlements that lack even basic protections, increasing their vulnerability to sexual violence.

These climate disruptions compound at the community and household level, where the cumulative weight of repeated shocks falls hardest on those with the least capacity to absorb them.

The impacts of climate disasters are felt more acutely by poor households who are caught in a perpetual loss-recovery cycle. At the household level, climate - linked disasters exacerbate vulnerabilities and erode economic buffers. For low-income households, each flood, cyclone, or drought event chips away at savings, erodes livelihoods, and traps households in enduring cycles of poverty, debt, and uncertainty. For instance, in Mumbai, the 2005 floods resulted in direct losses of household assets, lost income, and large expenditures on home repairs. The total equivalent loss was estimated to be nearly 85% of the average annual income for the poorest households.[21] This is markedly different from previous disaster patterns, where experts suggest that households often had sufficient recovery periods between disasters to rebuild their homes, livelihoods, and assets, which in turn enabled households to gain stability to cope with subsequent shocks. However, under the current scenario where disasters occur with greater frequency, households now face shrinking recovery windows (Figure 3). The unpredictability further undermines preparedness to withstand subsequent crises.

Figure 3: The new normal: Conceptual snapshot of impact and resilience of a community experiencing more frequent disaster events.

Back-to-back disasters keep communities from regaining stability, trapping them in an unending recovery loop

Before the normal

The new normal

Cumulative impact

Baseline resilience

Time

Time between disasters allowed communities to recover and develop mechanisms to weather common disasters

Time between disasters is now limited, shrinking the window available for preparedness and recovery

▲ Onset of disaster
— Impact on community
--- Impact on vulnerable groups

Dimension of impact	Before noticeable impact of climate change on disasters	In the New Climate Normal
	Disasters were largely single, isolated events such as a flood, drought, or cyclones occurring one at a time, or annual recurrences (e.g., annual floods).	Shocks today are increasingly overlapping, cascading, and recurrent; communities are faced with a multi-hazard future.
Survival and ability to cope	Communities had evolved tested coping strategies including adaptive housing designs (like stilted homes in flood-prone regions) or resettlement practices during times of floods that offered protection to communities.	Floods and other disasters are occurring more frequently, with greater intensity, for which traditional coping mechanisms may no longer be sufficient. Communities are also facing new types of hazards (e.g., flood-prone communities faced with droughts) for which they lack coping strategies.
Economic Resilience	Families were able to rebuild livelihoods after crises through informal savings and small asset bases, during seasonal recovery periods that allowed income streams to stabilize.	Repeated and overlapping shocks are eroding economic buffers and depleting household assets, with little time for recovery between disasters, trapping vulnerable groups in a poverty loop
Natural Resources	Not all disasters aided natural resource replenishment but some of them, like recurring annual floods played a key role in ecological renewal such as by replenishing soil fertility and groundwater.	Frequent and overlapping disaster events are driving land erosion and the silting of arable areas, altering the soil structure, and weakening the regenerative capacity of local ecosystems.

Without support to rebuild their economic buffers or livelihoods, households are stuck in a lasting socioeconomic trap. It is estimated that for many disaster-affected households in India, it may take up to 19 years to recover from economic losses.[22] However, given the frequency of climate linked disaster events, this recovery period can elongate perpetually. If households are unable to rebuild their financial buffers before the next disaster strikes, poorest families, often already living at or below the poverty line, are typically forced to sell productive assets such as livestock, land, or machinery[23] , or take on debt[24] simply to survive short-term shocks. These coping strategies, while necessary in the moment, further weaken their ability to recover and generate income in the future. Over time, this erosion of economic resilience can entrench intergenerational poverty, turning each disaster from a temporary setback into a lasting socioeconomic trap.

Even in this scenario, most low-income households facing climate disaster risks lack social and financial protection to help them recover, let alone thrive. While the government has introduced several schemes and subsidies, their reach and adequacy remain limited. For example, only 22% of the farmers have crop insurance to protect against weather or climate-linked disaster disruptions[25]. Whereas only 15% of individuals are covered by any form of general insurance. On average, households receive barely one-third of their actual losses as compensation after climate disasters.[26] A large share of the population remains excluded even from this limited support, either due to a lack of asset ownership documents, limited awareness, or the inability to navigate complex application processes.

🏠 The toll of disasters extends beyond what can be measured in rupees or assets lost. The invisible impacts on mental health, social bonds, and community structure are equally consequential.

Beyond the economic impact, the psychological toll of disasters is profound. Shocks incapacitate people in the immediate aftermath and often leave lasting trauma and anxiety that manifest as long-term mental health challenges. For example, over 70% of survivors of the 2013 Uttarakhand floods reported symptoms of depression and post-traumatic stress disorder (PTSD).[27] In drought-prone states like Maharashtra, relentless pressure of recurrent droughts has driven farmers deeper into debt and despair, with a 2024 study linking the drought conditions to a 19% increase in suicides among male farmers.[28]

Further, disasters can lead to a loss of identity and trust, and fracture social cohesion, especially when communities are forced to seek their lives and livelihoods elsewhere. In Assam's Dhemaji district, recurrent floods have driven many men to migrate for work, leaving behind women and the elderly to sustain families with limited resources and support.[29] In Satabhaya village in Odisha, approximately 550 families have been relocated due to erosion caused by tidal flooding. However, these sites are located far from economic opportunities.[30] Estimates suggest that by 2050, 45 million Indians will be forced to migrate due to climate-related disasters.[31]

Such forced migration can rupture the social fabric of communities and erode trust networks, thereby increasing their vulnerability to future shocks. Migrants, too, may be exposed to discrimination and excluded from government services and welfare schemes, even when disasters in the host communities disrupt their livelihoods.

👥 Even within communities, these burdens do not fall evenly. Across every dimension, exposure to disaster, impact, access to relief, and speed of recovery, inequalities inherent within the community shape who suffers the most.

The greatest burden of climate linked disaster events is borne by the most marginalized segments of society. While disasters affect rural and urban areas with equal severity, their impacts manifest differently across contexts due to variations in exposure, infrastructure, governance systems, and access to essential services. Similarly, social hierarchies and gender and caste biases restrict the opportunity to cope with and recover from disasters, thereby amplifying vulnerability. Our consultations suggest that current disaster risk reduction systems are often designed for a *default citizen* persona of an able-bodied man with access to technology and documentation. Those who fall outside this construct remain excluded from preparedness and relief systems. The differential impacts of disasters on different identity groups are explored below:

▸ **Urban vs Rural communities:** Rural communities suffer from remoteness, while urban informal settlements face overcrowding, infrastructure failures, and exclusion from formal relief systems. In rural areas, isolation combined with poor connectivity often delays the arrival of relief supplies and medical assistance by days. During our field visits, villagers in rural Assam reported that government relief, particularly food supplies, can take up to a week to arrive during floods. Further, relief camps are frequently located far from affected settlements, and many lack adequate sanitation facilities, such as having only two or three toilets for 200–300 people. On the livelihoods front, crop losses and livestock deaths due to drowning or disease, and soil erosion destroy rural livelihoods, even as markets and supply chains take months to recover.

In contrast, the scale and complexity of exposure present a different set of challenges in urban areas. High population density, unplanned growth, and aging infrastructure make rescue and relief operations logistically demanding and time-consuming. Waterlogging, power outages, sewage failures, and transport breakdowns can often paralyze urban systems within hours. Migrants living in dense, hazard-prone informal settlements face additional threats, including outbreaks of waterborne diseases following floods or heavy rainfall. These marginalized segments bear the brunt of climate-linked disasters, not just during visible disasters like floods but also heatwaves.

Rising temperatures compounded by rapid urbanization have created "heat islands" that expose gig and informal workers, such as delivery riders, construction labourers, and street vendors, to extreme heat and health risks like dehydration and heatstroke. A study in Delhi found that for every 1°C increase in temperature, informal workers' net earnings declined by about 19%, with income losses reaching up to 40% during heatwaves.[32]

Figure 4: Summary comparison of how disaster impacts vary in rural and urban communities

	Rural communities	Urban communities
Physical impacts	▶ Remoteness and weak connectivity often delay evacuation support, ▶ Healthcare centers, schools are susceptible to damage or use as shelters, disruptingp ublic services relief supplies, and medical care,	▶ Disasters overwhelm transport and power, waterlogging and WASH disruptions create unhygienic conditions and disease risk ▶ Informal settlements located on floodplains, drains, low-lying land are prone to flooding, electrocution risk, and collapse ▶ Density of buildings makes evacuation and escape harder ▶ Loss of ground cover and concretization creates heat islands making informal workers prone to heat strokes and dehydration
Economic impacts	▶ Loss of standing crops, livestock during disasters impacts livelihoods; informal farm laborers loose livelihoods ▶ Silting and erosion of arable lands during floods and costal tides result in fields become unusable for agriculture ▶ Flooded roads and disrupted supply chains reduce access to markets, inputs, and fair prices ▶ People often lack *land pattas* for their houses or fields excluding them from disaster compensation	▶ Earnings are often daily or per-task, so floods/heatwaves shut down mobility and demand, causing immediate wage loss ▶ Many migrants lack proof of localization, or asset ownership to be able to gain access to relief and compensation
Social impacts	▶ Disrupted financial conditions drive distress migration social ties	▶ Migrants in informal settlements face eviction ▶ Migrants often lack trusted community networks that they can lean on in times of disasters for resources or emotional support

▶ **Women and girls:** Disasters have a profoundly gendered impact, often destroying the fragile livelihoods of women who are overrepresented in informal and care-based work. Women are also frequently excluded from male-dominated networks that share critical information about relief and recovery efforts. Indeed, women and children face a mortality risk up to 14 times higher than men in disaster situations.[33] Further, in the absence of land ownership or formal employment, women face unique challenges in rebuilding their lives and livelihoods. Research shows that women farmers in drought-prone regions who are widowed tend to be especially isolated, both socially and geographically, limiting their access to support systems.

> *"Women farmers have high dependency and need to take help from people during drought. They may also get certain information later than others."*
>
> – CSO working with farmers in rural Maharashtra

▶ **People with disabilities and the elderly:** The needs of persons with disabilities and older adults are often overlooked in disaster preparedness, relief, and recovery systems. Inaccessible infrastructure, communication barriers, and a lack of targeted outreach frequently exclude them from essential services during and after crises. Many older adults and people with disabilities also lack the financial resources, mobility, or support networks needed to recover independently, increasing their vulnerability to long- term neglect. In flood-prone villages of Assam, for example, elderly individuals often refuse to evacuate because they are unable to reach shelters or fear losing their household assets.[34]

> *"The elderly often force the younger generation to leave and stay back in the floods to make sure the cattle and belongings are safe."*
>
> – Community member in flood affected village in Assam

> *"After the floods, the elderly who live alone have a lot of problems. They can't travel far to get the food rations provided by the government."*
>
> – CSO working with flood-affected communities in Assam

> *"The disabled are dependent on friends and family to move them to shelters, and that can only happen in the night once everyone has finished their own shifting."*
>
> – Practitioner participating in learning circle

▶ **Dalit and Tribal populations:** Caste and indigeneity significantly shape exposure and vulnerability to disasters in India. Marginalized communities, especially Dalits, Adivasis, and tribal populations, are often pushed into hazard-prone zones such as riverbanks, floodplains, or informal urban peripheries, where their homes and assets are highly exposed to climate shocks. These risks are compounded by everyday discrimination that limits their access to scarce resources like clean water, shelter, and aid, reinforcing cycles of exclusion even in times of crisis. For example, in Bijapur, Karnataka, 92% of Dalits did not receive relief after the 2009 floods.[35] The permanent loss of land and ecosystems among tribal communities also remains largely under-recognized. For instance, repeated disasters have displaced the Mising tribe in Assam from their traditional lands, and they are unable to reclaim it due to an absence of legal records of their ownership, threatening both cultural identity and intergenerational well-being.[36]

▶ **Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, Asexual, and other non-cis sexual identities (LGBTQIA+):** The vulnerability of the LGBTQIA+ community is profound. Systemic exclusion compounds their losses - from policies that fail to recognise queer networks such as chosen families, thereby denying them legal claims to compensation, to the persistent struggle to obtain official identification that matches their gender identity. For transgender individuals, often excluded from formal employment due to discrimination, the impact is even more immediate. Many depend on begging or sex work for survival- livelihoods that vanish when public spaces shut down during disasters. After the 2004 tsunami, members of the Aravani community who lost their costumes, jewellery, and mobility could no longer perform or beg, wiping out their only income.[37]

Figure 4: Summary comparison of how disaster impacts vary in rural and urban communities

	Gender	Age and disability	Caste and Indigeneity	LGBTQI
Physical	▶ **Higher mortality** due to limited mobility, decision making power & access to risk information. Lack of private spaces for women in shelters.	▶ High **dependency on others** for warnings evacuation, **increase injury and mortality.** Aid and rescue **processes are not designed keeping constraints in mind.**	▶ Forced to **live in segregated hazard-prone areas** where homes and assets are more exposed. Physical Isolation from other communities **slows access to early warnings.**	▶ Access **to shelter and relief is often restricted because of enforcement of a strict gender binary norms,** and discrimination.
Economic	▶ Disproportionate presence in **informal employment increases livelihood losses.** Absence of assets in their name **blocks access to compensation and insurance.**	▶ Often **lack the financial and physical capacity to recover** after disasters, leaving them dependent long term.	▶ Disproportionate presence in **informal employment increases livelihood losses.** ▶ Often form the base of economic pyramid and thus have **fewer buffers to fall back on.**	▶ Policies often **fail to recognize queer identities and families,** cutting them off from relief and compensation.
Social	▶ **Increase in sexual and physical abuse** due to partner violence and exposure to unsafe conditions. Often **subject to trafficking** by desperate families.	▶ Increased **migration of youth** precipitated by disasters further **exacerbates the loneliness** and dependence of the elderly.	▶ Deep rooted discrimination often results in **restricted access to scarce shared resources,** including water, safe shelter, aid and rescue both during and after disasters.	▶ Very **limited social nets** may exist to fall back on for support during disasters .
Examples/evidence	▶ Women accounted for 73% of all deaths in the 2004 tsunami in Cuddalore.[1] Intimate partner violence rose 98% in tsunami-affected states.[2]	▶ Older adults saw disproportionately high morality in Chennai floods due to missed warnings and limited mobility.[3]	▶ During the 2015 Chennai floods 90% of those injured were Dalits, 95%of the houses damaged were Dalit houses, 92% of livestock damaged belonged to Dalits[4]	▶ During Cyclone Fani, eight out of eleven transgender participants reported being denied entry to shelters because officials enforced a strict gender binary[5]

Taken together, these insights highlight the deep-rooted and multidimensional impacts of disasters, shaping not only the economic stability of households but also the social cohesion, equity, andlong-term development of communities. How communities experience and cope with disasters is therefore central to realizing India's broader development goals and ambitions.

Marginalised communities as agents of their own resilience

Taken together, the above patterns reflect a stark reality: marginalized groups or segments bear disproportionate burden during climate disasters. However, they are not just victims. They bring knowledge, networks, and adaptive capacity that formal systems often overlook"

▶ **Women** are frequently the first responders. In Kerala, Kudumbashree women's networks led rescue, relief, and recovery across all three phases of the 2018 floods. In Andhra Pradesh, women's self-help groups manage cyclone shelters year-round—not as beneficiaries, but as operators. When women lead disaster planning, resilience outcomes improve for entire communities.

▶ **Older adults and people with disabilities** carry memory and deep community knowledge that formal data systems cannot capture. Their lived experience of past disasters—which routes flooded, which wells stayed clean, which crops survived—can strengthen community-wide preparedness when actively drawn upon. In Assam, elderly residents recall flood patterns spanning decades; this knowledge, when integrated into planning, has informed evacuation timing and shelter placement.

▶ **Tribal and Dalit communities** maintain traditional coping practices refined over generations—seed preservation, water harvesting, mutual aid networks—that have sustained them through repeated shocks. Yet these practices remain largely invisible to mainstream disaster management.

The same communities and groups that face the greatest exposure also possess knowledge and capacity that can anchor more effective resilience systems. The right approach to resilience would lie in creating systems that recognize and anchor on these capacities to deliver resilience solutions.

🧱 How communities experience, recover from, and rebuild after disasters will be central to the country's development ambitions and communities' well-being. India has come a long way in responding to climate disasters, but the focus must now shift towards building resilience.

India has made remarkable progress in building response systems that ensure the survival of communities. Even as climate disasters become more frequent and severe, India has made remarkable progress in strengthening response mechanisms that safeguard lives. Over the past two decades, anticipatory evacuations, rapid relief mobilization, and stronger institutional capacity, developed in close collaboration with communities, have drastically reduced mortality. States such as Odisha and Kerala exemplify how integrated planning and deep community engagement can save lives during major climate events. This achievement is significant and reflects a country that has learned to protect its people at scale.

But without a shift in approach, communities exposed to climate disasters are unlikely to break out of repeated event-impact cycles or improve their well-being. Intensifying shocks will not only expose vulnerabilities but leave communities with less time and resources to recover and rebuild. The constant erosion of savings and impact on health and education will set back vulnerable families. As climate-linked disasters become more complex, frequent, and severe, disaster response must evolve to not only protect people in the moment but also equip communities to thrive in a new disaster-normal.

Resilience building offers an opportunity to seek pathways that shift from avoiding losses to creating possibilities for change. Building resilience can become the converging point that helps reimagine development, including empowering communities, building trust and coordination between communities and government actors, and forging of cross sector partnerships. Bringing community centricity to resilience building efforts can help ensure that the narrative moves from survival to thriving in spite of disasters.

Global evidence already supports the case for this investment. Every $1 invested in disaster risk reduction, adaptation, and resilience building can save up to $15 in post-disaster response and recovery costs[38]. In India, dialogue has already started to shift towards creating resilient infrastructure and channelling a greater share of public funds to rebuilding efforts. Yet, much of the discussion, globally and in India, remains top-down and without a clear articulation of what resilience can mean beyond saving lives.

The next chapter dives deeper into understanding how resilience develops at the community level, how it can be supported through strong inter-relational capacities between communities and other stakeholders, and what it means to build resilience that works to safeguard futures.

💡 Key takeaways

▶ India has entered a "new normal" where 85% of districts face floods, droughts, or cyclones, and extreme weather events occurred on 86% of days in 2023, making disasters a persistent feature of daily life, not isolated events.

▶ The economic toll is severe: USD 12 billion estimated annual losses nationwide; poor households can lose up to 85% of annual income from a single disaster and face estimated recovery times of up to 19 years.

▶ Climate disasters are actively unravelling hard-won development gains in education, healthcare, and gender equity by shutting down schools, disrupting immunization drives, and increasing gender-based violence.

▶ Marginalized segments such as women, Dalits, persons with disabilities, LGBTQIA+ groups, and informal workers bear the heaviest burden of climate disasters; yet disaster systems often exclude them.

▶ India's disaster response capabilities have improved significantly, but the focus must now shift from saving lives alone to building long-term community resilience that safeguards livelihoods, well-being, and dignity.

02
Resilience Reimagined

Centering communities, not systems

▼ Many traditional definitions of resilience are top-down and do not adequately focus on for whom resilience is being built.

Global frameworks have advanced the resilience agenda and provided a common definition for dialogue. Across global and national frameworks, resilience often focuses on "bouncing back" of systems and communities. For example, the United Nations Office for Disaster Risk Reduction (UNDRR) Sendai framework considers resilience as the "ability of a system, community or society to resist, absorb, accommodate, adapt to, transform and recover from hazards." Similarly, the Intergovernmental Panel on Climate Change (IPCC) defines resilience as the capacity to "maintain essential functions, identity, and structure." These frameworks offer clear institutional blueprints and have shaped national and international responses to disaster recovery and resilience.

However, these frameworks are often technocratic and stop short of centring communities. Many of the frameworks place communities at an equal footing with infrastructure and public service systems, as elements to be protected, rather than creators and users of the infrastructure and public service systems who can be agents of their own resilience. In practice, this has resulted in resilience building being viewed as a technical exercise that emphasizes infrastructure hardening, administrative coordination, and public service restoration. Success is measured by how fast systems (e.g., road and energy infrastructure) bounce back and not whether all people recover equitably or whether communities have the support they need to lead recovery.

Even when definitions are people or community-centric, communities are rarely treated as architects of their own resilience. For example, the National Institute of Urban Affairs (NIUA) in India defines disaster resilience as "anticipating, planning, and reducing disaster risk to effectively protect persons, communities, countries, and their livelihoods." While channelling a community-centric view, our consultations highlight that much of the practice treats communities as recipients of external aid and applies resilience through a uniform lens for all communities. Implicit in these definitions is the notion that protection or restoration of pre-disaster conditions were desirable states. However, for many communities or individuals, those conditions (e.g., fragile livelihoods, limited agency and participation in decision making, exclusion of nature-based or indigenous practices to weather climate disaster shocks) might have made them vulnerable in the first place.

▼ True resilience centres on communities. It must anchor on adaptability, agency, equity, and dignity – principles that reflect community realities and can create solutions that work.

To move beyond these limitations, a new approach is needed. At the core of this reset is a shift in whose lives and voices count in recovery and resilience building. Resilience efforts must place communities at the core, not only by designing mitigation, adaptation, preparedness, response, and recovery measures aimed at serving them, but also by ensuring that communities play a central role in shaping, implementing, and sustaining these measures. This is critical for several reasons:

▶ **Disasters are deeply localised.** Climate disasters are shaped by micro-level realities that communities deeply understand (e.g., local geography, which impacts how floods might affect a village). Their lived experience makes them best positioned to identify risks, priorities, and context-appropriate solutions.

▶ **Communities are first responders, and proximity to the hazard gives them a unique advantage.** When climate disasters strike, especially fast-onset ones, neighbours, kin networks, women's groups, and local institutions are often the first responders, long before formal government aid arrives. During the narrow response window, the community's ability to mobilise to save lives (e.g., by supporting older adults to get to shelters) and provide relief is crucial. Communities play a key role in directing formal systems to direct their efforts and after formal systems withdraw, continue to support members to recover and build resilience (e.g., providing care and kinship, help with rebuilding homes, etc.).

▶ **Communities possess inherent resilience, knowledge, and mechanisms** Through historical memory of hazards, indigenous knowledge, and local governance structures, communities possess both knowledge and mobilisation mechanisms that can be central to building resilience. This includes practices around recognizing disasters, designing assets (e.g., stilted homes, granaries, community seed banks) that can help them withstand disasters, and collective agency that can help negotiate with public systems for resources or measures that help reduce vulnerability (e.g., Odisha's fisher cooperatives negotiating for resources to better prepare against cyclones).

▶ **Resilience rooted in community norms and behaviour is more adaptive and sustainable.** When communities become true owners of resilience, it shifts from being a set of practices to a shared mindset. This makes it more likely to endure, ensuring that knowledge, action, and vigilance are continuously reinforced across generations. Further community-led resilience can evolve in line with changing scenarios and integrating learnings.

Centring resilience on communities is not optional, rather it is foundational for building effective, long-term disaster resilience. Community-centred resilience must embed four key principles:

▸ **Agency** of communities to decide, design, and implement the preparedness, recovery, adaptation and mitigation solutions that serve their needs, local realities, livelihoods, and cultural fabric. Communities must be co-creators, of disaster resilience strategies, helping define priorities, manage resources that exist within communities or are provided to them, and leading local responses. This is critical to shift resilience efforts from the protection of communities to their participation.

▸ **Adaptability** that allows communities to not merely absorb shocks but also evolve and strengthen local systems for future risks. Such adaptability depends on collective learning and ensuring deeper cooperation within the community and between the community and other systemic actors, such as government and civil society.

▸ **Equity** that ensures access to rescue, aid, and resources fairly. It must intentionally address structural divides of caste, gender, class, disability, age, origin (migrant vs. non-migrant), and any other forms of discrimination inherent within the communities' social fabric, to ensure that those who are most marginalized have a say in shaping resilience-building that meets their needs. This also means questioning prevailing inequalities or social hierarchies within communities and looking at "communities of fate" that are tied by factors other than geography alone (see explanation later).

▸ **Dignity** that respects local knowledge, cultural nuances, and treats people not as victims but also as stewards of wisdom. It can ensure resilience-building shifts from a model of charity and handouts to one rooted in ownership and cultural sensitivity. For example, in Assam, many communities have shown reluctance to adopt elevated chang ghar housing because of its cultural association with other ethnic groups. Similarly, creating appropriate sanitation infrastructure in disaster shelters is important to ensure the dignity of individuals using those facilities.

Communities of fate, and not just place, should shape how resilience is viewed and built

While adopting a community centred view of building resilience, it is important to define what constitutes a community. In rural areas, communities are often defined geographically—villages or clusters where people live and work in proximity. However, ties of kinship and social hierarchies (caste, class, etc.) often determine the distribution of resources and how decisions are made. As noted earlier, this can manifest as very different degree of impact and experience of living through a disaster. In urban settings, this notion becomes even more complex as a sense of place is intertwined by many other factors. Here, communities that experience disaster impacts similarly may include migrants, gig workers, informal settlers, or face similar exposure and disruptions even if not collocated.

Many grassroot organizations highlight that migrant communities in urban areas also lack a sense of belonging to the place while also being outside the formal ward boundaries or urban governance systems; therefore, they rarely actively participate in resilience efforts and systemic efforts often fail to account for them. Therefore, it is important to look at "communities of fate" where individuals are linked not only by geography but by shared vulnerabilities, collective risk exposure, and a mutual stake in recovery. These groups are often identified and mobilized through social bonds, livelihood networks, service ecosystems, or mutual aid systems that emerge organically during times of crisis.

These principles are not abstract. They manifest through specific physical, financial, human, natural, and social resources ("capitals") that communities draw upon in the face of climate-linked disasters. Building resilience requires these resources as levers that can be strengthened to empower and support communities, to recover from and thrive in this new normal.

Building resilience is not a single intervention but a continuous process that must unfold across every stage of a disaster. It begins with strengthening the systems and practices that help communities anticipate risks and prepare in advance. It continues through timely, well-coordinated response efforts that reduce harm, and through recovery approaches that rebuild livelihoods and infrastructure in stronger, more resilient ways. It extends further into long-term adaptation and mitigation strategies that lower future vulnerability. When resilience is woven through this entire cycle, communities face fewer losses, regain stability more quickly, and become progressively better equipped to withstand future shocks.

Figure 6: A community-centric framework for resilience building

Samaaj	Sarkaar	Bazaar
• Civil Society Organizations and NGOs	• NDMA and SDMA	• Corporations (e.g., financial institutions, telecom companies)
• Philanthropies	• NDRF and SDRF	• Startups
• CSR Funders	• Line departments (Health, Water, Roads and Public Works, etc.)	• Private funders and impact investors
• Media Organizations	• Local government (District Administration, Police)	
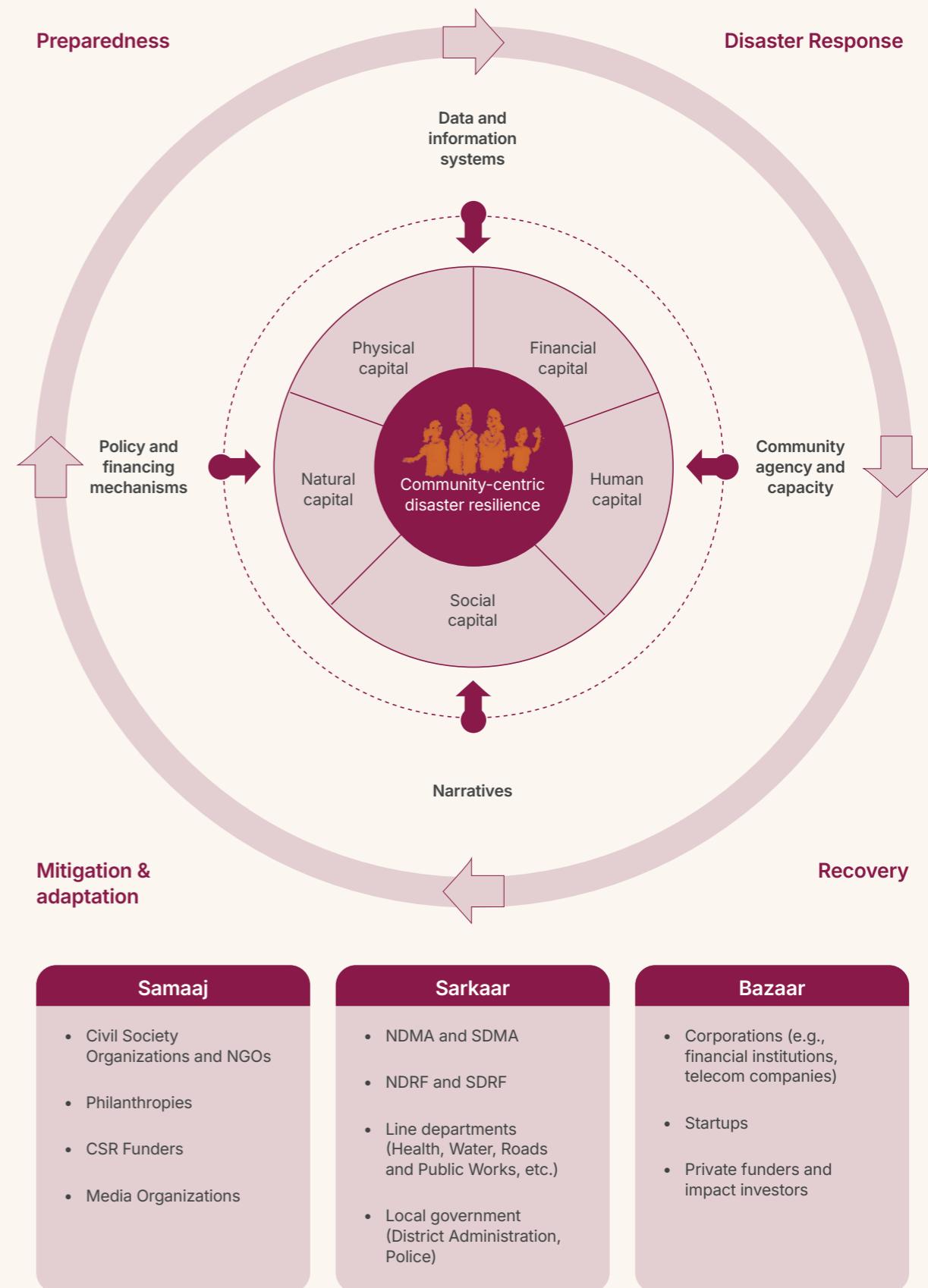
Such resilience is built on five forms of capital that communities already possess; systems must look to strengthen these capitals to empower communities. Consultations with practitioners working with communities across India to build resilience highlighted that communities rely on different types of resources to anticipate risks, absorb shocks, recover, and adapt their lives and livelihoods for the next climate disaster. These include infrastructure that they build and maintain (e.g., river bunds, livestock shelters), financial buffers, knowledge of the community and time-tested practices, and social networks that they can anchor on when experiencing a disaster. We refer to these resources as different types of "capital". While climate disasters are becoming more frequent, severe, and unpredictable, the collective experience of practitioners suggests that to effectively build resilience, system actors (e.g., government and philanthropies) must direct their efforts to strengthen these capitals to empower communities. Five different types of capital emerged in our discussions as essential ingredients of building community resilience:

1. Physical Capital: This includes the infrastructure and technologies that protect lives and livelihoods. These physical assets are essential for daily living and become critical when disasters strike. At the community level, schools and community buildings can serve as emergency shelters, while solar-powered microgrids ensure uninterrupted energy for essential services such as healthcare. Elevated, flood-proof grain storage facilities and sanitation systems help protect livelihoods and prevent disease during floods. At the household level, disaster-resistant housing, secure animal shelters, and feed and fodder reserves support both survival and rapid recovery.

India has several indigenous examples of architecture that have evolved to be resilient towards disasters. For instance, the Bhunga circular houses of Kutch in Gujarat distribute seismic forces evenly due to their unique design, reducing structural stress and enabling them to withstand devastating earthquakes with minimal damage.[39] There is a need to identify and bring such traditional architectures, able to withstand climate-linked disasters, to the forefront and support their wider adoption.

2. Financial Capital: This form of capital includes financial buffers, social protection mechanisms, and access to credit — that help households cope with income shocks when livelihoods are disrupted, meet healthcare expenses, and rebuild after disasters. For example, community- or women-led savings collectives can mobilize funds for recovery, enabling members to repurchase damaged equipment or seeds. Similarly, microinsurance for crops and livestock and social assistance programs (such as old-age pensions or employment guarantee schemes like the Mahatma Gandhi National Rural Employment Guarantee Act, MGNREGA) can help buffer income losses. Even remittances from migrant family members often serve as crucial external support, helping affected households rebuild. Financial buffers prevent households from adopting negative coping strategies such as taking high-interest loans, selling assets, or pulling children out of school - actions that increase long-term vulnerability.

Beyond recovery, access to financial capital enables anticipatory action, allowing households to invest in resilient housing, stock essential supplies like food, medicine, and fodder, or evacuate more quickly when disasters are forecast. For instance, in Cambodia, community-managed rotating pooled funds offer microloans to enable households to invest in disaster-resilient assets and livelihoods, strengthening their capacity to withstand future shocks[40] .

3. Human Capital: It comprises knowledge, skills and local leadership within communities to enable adaptive decision making and rebuild better. This often translates into how communities organize and inform responses for crises. For example, training individuals on basic first aid (e.g., as first responders) or providing mental health support post-disasters can make a key difference in how well communities survive and recover post-disasters. Similar to financial capital, investing in human capital can also act as a key lever of resilience and not just recovery. For example, training community members to create disaster-proof housing or other adaptation structures (e.g., embankments) in the form of training on climate-resilient livelihoods can help build resilience of households and communities. Similarly, ensuring children and youth receive climate change and disaster resilience-oriented education can ensure higher awareness of the risks a community faces and result in better long-term decision-making at the community level. Community networks and structures can also be leveraged to build and strengthen community adaptation.

4. Social capital: It comprises relationships, networks, trust, norms, and decision-making structures within and between communities that individuals rely on for mutual support and direction. Kinship and neighbourhood ties are often the first responders that stretch across community groups, villages, and towns. During the 2018 Kerala floods, for instance, 62% of the families reported receiving help from their neighbours and communities either in the form of evacuation support or shelter.[41] For many marginalized segments, including persons with disabilities, older adults, and single mothers, this form of support is vital.

On the other hand, community institutions (e.g., Panchayati Raj Institutions (PRIS), Gram Panchayats (GPs), SHGs, ASHA workers) can share risk information through informal and formal channels, rally the community in times of crises, and also coordinate with system actors (e.g., local government officials and Civil Society Organizations (CSOs) to facilitate access to external resources and technical support, thus contributing to a more effective response.

Further, locally created formal and informal networks can also be used to create buy-in for collective action for adaptation and mitigation. For instance, traditional Johads are community-led water management systems in Rajasthan that involve building small earthen dams to capture and store rainwater, which helps recharge groundwater, improve water availability for communities, and improve drought resilience. This traditional method, implemented by "gram sabhas", can mobilize community participation to construct and maintain these structures.

5. Natural Capital: This includes the land, water, forests, and biodiversity ecosystems that are not only key sources of livelihood for communities (e.g., tribal communities that depend on forests for produce, farmers dependent on water and soil systems for productivity) but also act as natural buffers against hazards. Protecting and strengthening these ecosystems is fundamental to the social and economic well-being of disaster-prone regions. For example, healthy forest ecosystems like the mangroves in Odisha help absorb storm surges. Similarly, wetlands and forests absorb floodwaters, stabilize soils, and regulate local climates.

These five capitals do not exist in a silo but interact, compound, transform, and substitute for each other. Individuals and communities constantly exchange and rebalance these five forms of capital. For example, when physical infrastructure is damaged, communities may turn to financial resources such as common savings pools and human capital within the community to initiate repair. Similarly, when financial buffers deplete, social networks could provide informal loans or shared labour to avert or tide over income loss. When natural ecosystems degrade, human capital in the form of local ecological knowledge could help regenerate them.

Similarly, when financial buffers deplete, social networks could provide informal loans or shared labour to avert or tide over income loss. When natural ecosystems degrade, human capital in the form of local ecological knowledge could help regenerate them. Similarly, natural ecosystems may provide alternate livelihoods or sources of income when primary livelihood is destroyed (e.g., agroforestry, forest-based produce, etc.). While there is no fixed formula for how these resources transform or complement each other, each community continuously adapts its balance based on available assets and risks.

For example, before cyclone Fani struck in 2019, women's self-help groups in coastal Odisha had built modest common savings pools (financial capital) and also with government and CSO support, trained their members in first aid and evacuation protocols (human capital).

Regular meetings of these groups had also strengthened trust and communication norms between members (social capital). When the cyclone warning was issued, drawing on their knowledge and networks, the members supported the evacuation of their community, including older adults, pre-positioned food stocks, and coordinated with local Anganwadi workers to ensure engagement and a continued learning environment for the community's children. Post the cyclone, the savings helped fund immediate repairs while government compensation was awaited.

This is resilience building in practice, where different capitals that communities already possess can enable and amplify others to help communities prepare for, recover from, and rebuild after disasters. When communities are empowered by strengthening these forms of capital, resilience can become self-reinforcing.

How is this view of different forms of capital different from traditional disaster response?

Disaster response mechanisms adopt a very top-down approach of building these five forms of capital that views communities as passive recipients, is formulaic in its approach to assign aid and resources, and has limited focus on vital but important aspects of resilience building such as social capital. The exhibit on the next page illustrates the difference.

Figure 7: High level difference between disaster response and resilience

	Disaster response	Disaster resilience
Physical capital	Focus on rebuilding damaged essential infrastructure and housing post-disaster to resume normalcy	→ Adaptation and mitigation measures actively safeguard assets that are vital to communities, with a focus on building back stronger
Economic and Financial capital	Financial support to communities is largely centered on post-disaster compensation which often flows slowly and unevenly	→ Communities have access to multiple financial buffers like pre-emptive cash transfers, microinsurance, etc., and are integrating diversified (resilient) livelihoods.
Human capital	Communities viewed largely as beneficiaries of aid rather than agents of recovery.	→ People seen as drivers of change - trained, skilled, and informed to anticipate and adapt to risks. Local leadership, indigenous knowledge, and traditional practices are recognized and integrated into planning, education, and preparedness systems.
Social capital	Social capital tends to operate at an informal level, driven by individual networks rather than structured or institutionalized community mechanisms	→ Resilience built through strong local networks and mutual aid systems facilitated by solutions that allow access to these networks in times of disasters
Natural capital	Environmental restoration treated as secondary to rebuilding infrastructure. Short-term exploitation of natural resources to meet relief needs	→ Ecosystem protection seen as core to resilience—mangroves, wetlands, and forests valued as natural buffers. Communities steward and co-manage ecosystems, linking environmental health with livelihood security.

Communities cannot build these capitals alone. Samaaj, Sarkaar, and Bazaar need to come together to create an enabling environment where community resources are amplified, and communities themselves are empowered to address their resilience challenges.

Four dimensions are important to get right to create the right enabling conditions for communities to take charge of their resilience. These include:

▶ **Policy, governance, and financing** that create space for community ownership. This includes creating policy frameworks that not only recognize the role of but also ensure community groups have a voice in developing resilience strategies, community-level disaster planning (e.g., village level disaster plans), and ensuring implementation level accountability. For funding, this includes flexible funding that communities can leverage based on their needs, and that can be made available rapidly (e.g., pre-sanctioned funds).

▶ **Capacity and relationships** that strengthen the civic muscle of communities to organise themselves, participate in planning and response efforts, lead action, and enforce accountability. In practical terms, the civic muscle is reflected in mechanisms that support active citizenship, empower local institutions, include marginalized groups in decision making, and build the connective tissue between communities, CSOs, and government such that these emerge from crisis or SOS contacts to trust based anchors for proactive planning and implementation.

▶ **Data, information, and learning** that are accessible and actionable across all stages of a disaster cycle. This includes democratizing data to build early warning about impending disasters, as well as knowledge sharing to develop and action effective adaptation, response, and recovery. Systems like the early warning systems being deployed by the government or the private sector (e.g., Google's flood alert warning systems) are necessary to help communities understand risks and act early. Similarly, data systems that clearly highlight who is exposed to different risks and what their vulnerabilities are can help CSOs tailor their interventions. On the other hand, sharing best practices can ensure there is collective learning, and communities can make informed decisions on shoring up their own resilience.

▶ **Narratives** that recognize community agency, reframe their role from victims to change agents, and redefine success. This refers to public discourse and media framing that play a pivotal role in shaping awareness, political will, investment priorities, and ultimately what success looks like for disaster resilience. For example, narratives play a key role in making communities aware of the new disaster normal (i.e., disasters not being a one-off event) as well as highlighting what measures define the success of resilience efforts (e.g., lives saved or how well communities build back).

Figure 8: How enabling conditions must shift to empower communities

	Current scenario	Shift needed
Policy, governance, and funding	Government stakeholders and other actors treat community consultation as a box ticking exercise (or worse it is not operationalized at all) with little say in annual expenditures that are earmarked for a fixed set of activities.	→ Local governments and leaders create space for communities to be co-authors of disaster management plans and resilience initiatives; funding is adaptive and communities have say in how funds are utilized
Capacity and relationships	Communities are treated as beneficiaries with episodic or transactional interactions with system actors.	→ Communities are supported to build an active civic muscle to engage on resilience issues and are empowered to lead resilience initiatives
Data, information & learning	Information and data remain siloed and technical with little regard to leveraging communities' knowledge of local risk or sharing back with them contextual information.	→ Communities become co-creators of relevant data and information including local risk profiles, warning signals, good practices and are able to similarly access information from government actors.
Narratives	Narratives treat communities as beneficiaries or victims and focused on a few system metrics such as mortality reduction orinfrastructure created.	→ Narratives centre community voice, treat them as agents of change, and focus on lived experience of communities including persisting impacts.

Creating these enabling conditions and ensuring communities are empowered requires coordinated action across multiple actors. For example, civil society organizations and philanthropies (Samaaj) can support communities to collectivize and synthesize their own knowledge, build their civic muscle, and provide necessary funding that is flexible and rapid to tide over immediate recovery needs. On the other hand, communities can work with government institutions (Sarkaar) to create holistic disaster plans, map infrastructure requirements (e.g., shelters, embankments, storage bunks, provisions for marginalized or remote households), and direct government resources to build up the required physical and natural capital. Finally, Bazaar can step in with innovative ideas and solutions to help communities acquire infrastructure and technologies (e.g., emergency lights, communication), financial resources (e.g., insurance), and other services that support communities. Each actor can play a distinct role that also shifts across the disaster lifecycle. Figure 9 lays out the role of each actor.

Figure 9: Role of different actors in supporting communities to build resilience across different stages of the disaster lifecycle

Actor	Action needed by stage of the disaster lifecycle			
	Preparation	Response	Recovery	Adaptation & Long-term Resilience
Community *(Samaaj)*	‣ Co-develop village disaster plans with local govt (Human, Social)	‣ Lead rescue as first responders (Human, Social)	‣ Lead locally-driven needs assessments (Human, Social)	‣ Create and own long-term adaptation plans (Social, Natural)
	‣ Establish and maintain local early warning networks (Social, Human)	‣ Activate kinship/SHG networks for shelter and support (Human, Social)	‣ Direct reconstruction priorities based on local knowledge (Physical, Human)	‣ Maintain ecosystem buffers (mangroves, wetlands) (Natural)
	‣ Conduct preparedness drills; stockpile supplies (Human, Physical, Financial)	‣ Share resources: food, boats, medical supplies (Physical, Financial)	‣ Mobilise community labour for rebuilding (Human, Physical)	‣ Sustain disaster response committees and drills (Social, Human)
CSO *(Samaaj)*	‣ Train community members in first aid, rescue, EWS (Human)	‣ Support community-led rescue and relief operations (Social, Human)	‣ Provide technical support for recovery planning (Human)	‣ Build awareness on climate risks and adaptation (Human)
	‣ Facilitate village disaster planning processes (Social, Human)	‣ Coordinate aid distribution with local groups (Financial, Physical)	‣ Support restart of livelihoods and essential services (Social, Human)	‣ Connect communities for peer learning networks (Social, Human)
	‣ Support formation of women's collectives, VDMCs (Social)	‣ Provide psychosocial support (Human)	‣ Document and share recovery learnings (Human, Social)	‣ Support nature-based solutions (Natural, Human)

Actor	Action needed by stage of the disaster lifecycle			
	Preparation	Response	Recovery	Adaptation & Long-term Resilience
Philanthropy *(Bazaar)*	‣ Fund integration of preparedness into development (Financial)	‣ Release pre-positioned, flexible funding to frontline CSOs (Financial)	‣ Fund community-led reconstruction (Physical, Financial)	‣ Convene actors; build ecosystem infrastructure (Social)
	‣ Build CSO capacity for resilience work (Human, Social)	‣ Enable rapid community-led response (Financial)	‣ Support restart of education, health, WASH services (Human, Social)	‣ Support data systems and knowledge-sharing platforms (Human, Social)
	‣ Support community savings/insurance mechanisms (Financial)		‣ Provide flexible, multi-year recovery grants (Financial)	
Government *(Sarkaar)*	‣ Mandate and resource regular preparedness drills (Human, Physical)	‣ Lead rescue operations; deploy NDRF/SDRF (Physical)	‣ Restore essential infrastructure (Physical)	‣ Co-design adaptation plans with communities and CSOs (Human, Social)
	‣ Build early warning infrastructure; disseminate alerts (Physical, Financial)	‣ Coordinate with CSOs and community volunteers (Social)	‣ Establish norms and funding for community-led reconstruction (Social, Financial)	‣ Devolve power and funding to local bodies (PRIs, GPs) (Human, Financial)
	‣ Integrate resilience into district development plans (Physical, Financial)	‣ Activate emergency relief (food, shelter, medical) (Physical, Financial)	‣ Provide individual/household recovery assistance (Financial)	‣ Provide open access to risk data (Human)

Legend: ● Physical Capital; ● Financial Capital; ● Human Capital; ● Natural Capital; ● Social Capital

The above framework anchoring on the guiding principles, the five capitals, enabling conditions that support community empowerment, and the interconnected system of actors to anchor a community-centric approach to resilience, presents a distinct path forward to create solutions that work for communities in their context, are owned by them, and can be seen as adoption. Globally and in India, already this approach is anchoring many successful pilots and solutions to build community resilience in the face of the new normal, with Samaaj playing a key role in piloting new approaches.

The next chapter brings this framework to life by drawing on innovations to show what community-centric resilience looks like in practice.

🧠 Key takeaways

▶ Traditional resilience frameworks are technocratic and top-down, measuring success by how fast systems bounce back rather than whether all people recover equitably and with dignity.

▶ Community-centric resilience must be anchored in four principles: agency (communities as co-creators), adaptability (evolving for future risks), equity (addressing caste, gender, and class divides), and dignity (respecting local knowledge and culture).

▶ Resilience is built on five interconnected forms of capital—physical, financial, human, social, and natural—that communities already possess and that systems must strengthen rather than replace.

▶ An enabling environment requires shifts across four dimensions: policy and financing that create space for community ownership; capacity and relationships that build civic muscle; accessible data and learning systems; and narratives that reframe communities as agents of change.

▶ Coordinated action across Samaaj (civil society), Sarkaar (government), and Bazaar (markets) is essential, with each actor playing distinct roles across the disaster lifecycle—from preparation through long-term adaptation.

03
Proof and Promise

How civil society is pioneering community centric solutions

Across India and globally, Samaaj actors are demonstrating what community-centered resilience building looks like in practice. Working in partnerships with governments, philanthropies, and private sectors, they are pioneering approaches that are hyperlocal, inclusive, and rooted in community agency. These approaches serve as proof points for the approach laid out in the previous chapter and lay down entry points for other actors, including in the government, to seek inspiration to direct their own resilience-building efforts. Several of these innovative approaches being trialed globally and in India are summarized in figure 10. While the focus of these innovations might differ, they cluster around the four dimensions of creating an enabling environment that were identified earlier: a) policy, governance, and financing; b) capacity and relationships; c) data, information and learning; and d) narratives.

Figure 10: Global examples of Samaaj-led innovations to build community resilience

Centro Humboldt: Local Risk Planning and implementation for Resilience in Nicaragua

Centro Humboldt supported local risk planning by complementing community insights and indigenous knowledge with training and technical support to help develop locally-owned climate adaptation and disaster risk reduction plans. Further they facilitated creation of Community Water committees that were responsible for sustainable implementation, using Govt funds
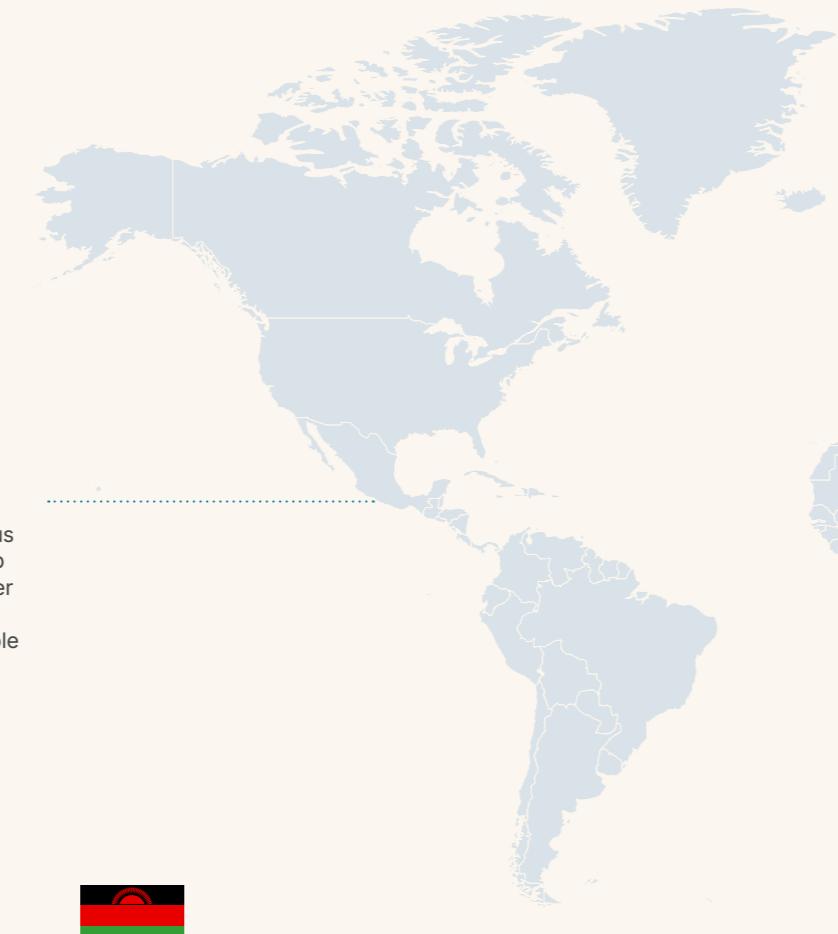
Jamaica's Cat-in-a-grid catastrophic bonds against cyclones

Jamaica's USD 150 million catastrophe bond, with the support of the World Bank, provides financial protection against hurricane losses through 2027. If no qualifying event occurs, the bond functions like a standard bond, however If a hurricane of sufficient intensity strikes, payouts of 30%-100% of the bond's value are made to Jamaica, depending on the storm's severity and path

Tearfund parametric insurance for droughts

Tearfund in combination with Humanity Insured invested in parametric insurance that leveraged satellite data to determine drought like conditions. Rapid trigger based insurance payout will allow proactive action to restrict loss of life and livelihood

This insurance payout is expected to result in a payout of USD 100K and preemptively support 1,200 households with drought tolerant crops and high value horticultural crops

Start Ready: Pooled Disaster Risk Financing for anticipatory disaster aid

Start Ready fund allows donors across 8 countries to pre-pools funds for disasters and thus share risks. The funds are released as anticipatory aid to qualifying NGOs in response to pre-aligned thresholds being breached to implement response plans created in consultation with people

For Cyclone Remal in Bangladesh, anticipatory action got triggered 48 hours before landfall to release 180 GBP and provide anticipatory support to 30K people

Community Revolving Fund (CRF) for Multi-Hazard Resilience

Cambodia's CRF operates as a community-owned, participatory fund where community members pool fund with additional developmental funding to providing flexible, low-interest micro-loan for resilience-building investments
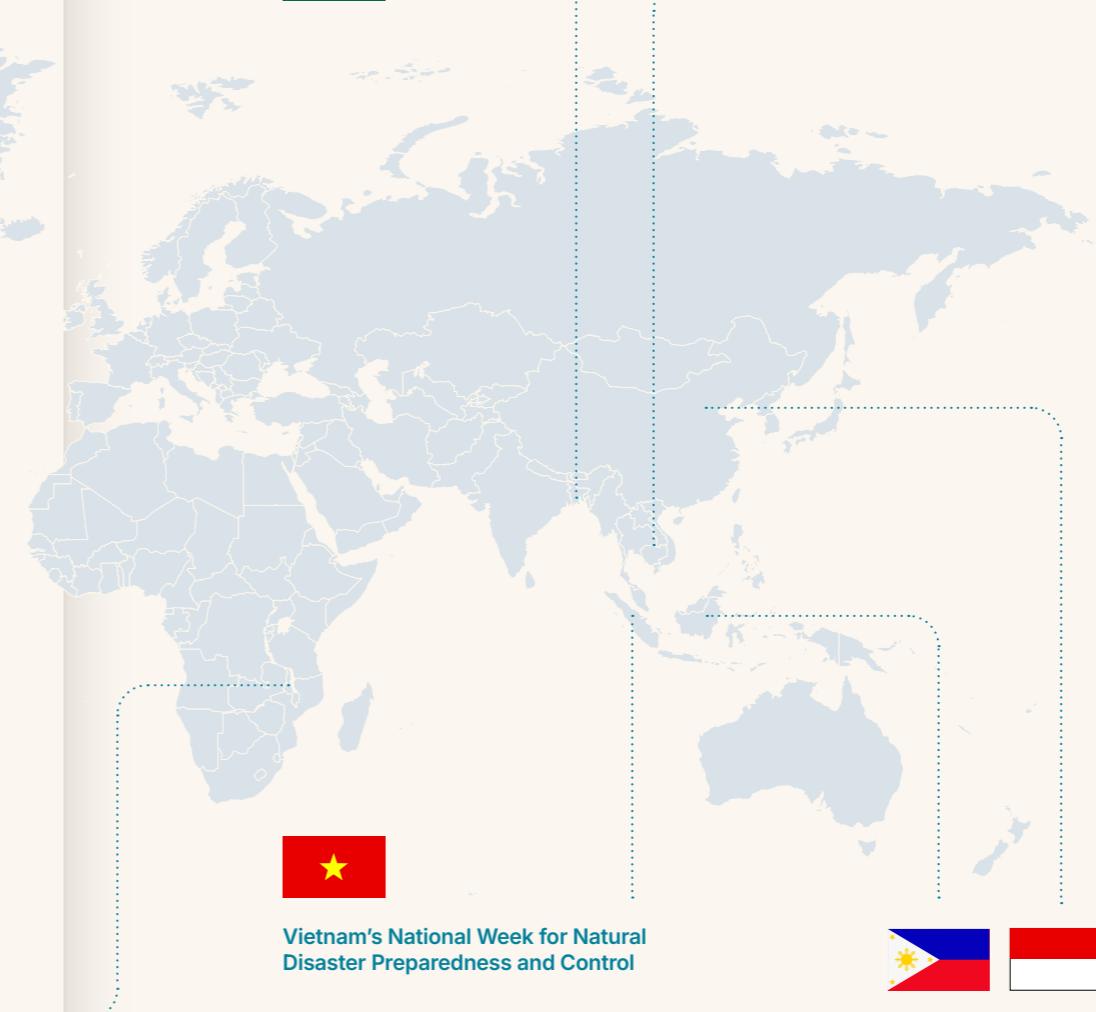
Vietnam's National Week for Natural Disaster Preparedness and Control

This is an annual awareness campaign that is run in mid May, just before the start of the cyclone season, each year. The initiative mobilizes government agencies, media, and society to generate awareness, prepare people and create a culture of disaster risk preparedness

In a survey conducted across 142 countries in 2023, 83 percent of households in Vietnam said they had plans in response to emergency relating to natural disasters, higher than the global average of 38 percent

PetaBencana real time hyperlocal disaster mapping platform

This platform leverages verified, crowd-sourced reports to inform residents, civil society, and government actors about high-risk areas, enabling rapid response and improving public safety

In flood peaks, the platform sees 21,000% increases in daily views from baseline rates, showcasing its reach and usage

Figure 11: Non-exhaustive list of Samaaj led resilience innovation pilots in India

Parametric heat insurance for informal women workers in Gujarat: SEWA piloted a heat insurance scheme in 2023 that triggered automatic payouts when extreme heat (40°C) persisted for two consecutive days.

Impact: The initiative expanded from 21,000 women in five districts of Gujarat in 2023 to 50,000 across 22 districts in 3 states in 2024.

Community-led disaster response in Eastern Uttar Pradesh: PGVS built Village Disaster Management Committees that led search, rescue, and evacuation during floods. Through regular drills and clear roles, communities acted swiftly and independently when early warnings are issued.

Impact: Across 95 villages, no flood-related fatalities were reported, highlighting the effectiveness of local ownership and training in disaster response.

Transboundary flood early warning between India and Nepal: Caritas India is fostering real-time flood collaboration by linking riverine communities across both countries through locally maintained water sensors and direct alerts.

Locally Driven Natural Resource Stewardship: WOTR works with rainfed villages across central and western India to promote community-led water conservation through traditional watershed practices, training villagers to self-manage shared water resources via village water committees.

Community mapping of tidal flooding in Kerala: ASAR and Equinoct helped communities in Ernakulam to document tidal flooding by creating maps highlighting high impact areas and capturing videographic evidence.

Impact: Their advocacy led to official recognition of tidal flooding as a disaster and the allocation of public funds for mitigation and compensation.

Parametric insurance for coastal workers: SEEDS, in partnership with the Tamil Nadu Consumer Education and Development Foundation (TAMCED), is testing a parametric insurance pilot for cyclone-affected household Chidambaram Taluk, Cuddalore.

Akshvi by SEEDS, a decentralized e-disaster wallet: The platform enables disaster-affected households to self-report their losses every time they are faced with an incident. Data is validated through AI and community volunteers, creating transparent household-level loss records for shaping policies.

Impact: A pilot across six flood-affected districts in West Bengal saw over 2,300 families self-report cyclone-related losses, with a 98% verification success rate of the reported data.

The sections below present an overview of approaches being trialled across the four dimensions, along with case studies.

1. Policy and financing

Innovative financing approaches address one of the most critical gaps in disaster resilience by ensuring that resources reach households and frontline organizations when they are needed the most. Crucially, what distinguishes these approaches is not just the availability of funds and their timing, but also how they flow in a manner that provides greater flexibility and control to communities and CSOs to deploy these funds. Some of these approaches include:
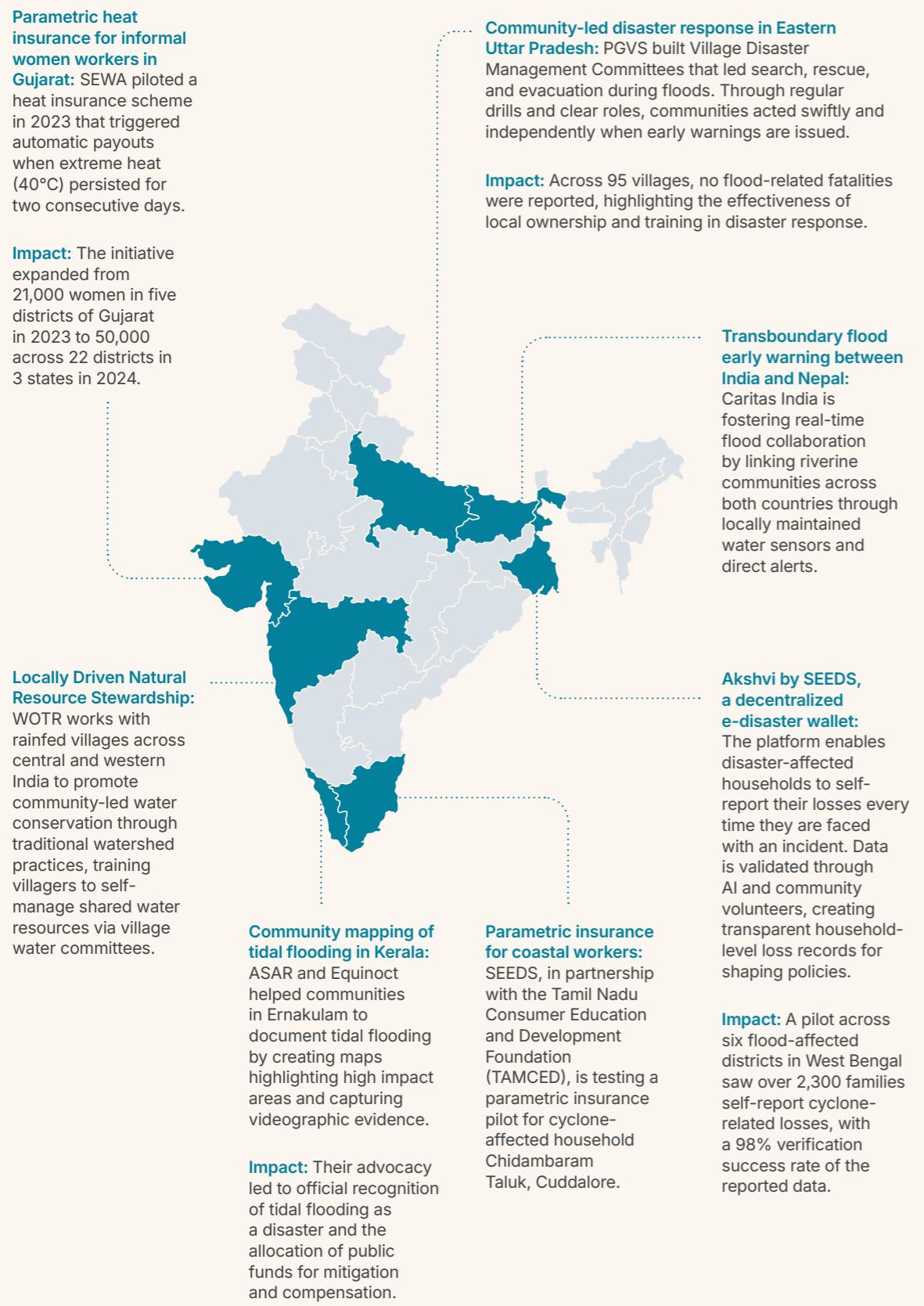
▶ **Community revolving funds** that operate as community-owned savings and credit systems where members pool resources to provide flexible, low-interest loans to community members for resilience-building investments. Because communities control the funds and lending decisions, these mechanisms can enable trust-based lending to support the building of financial capital of the community and simultaneously strengthen social capital (trust-based networks and collective governance). Examples include:

- Cambodia's Community Revolving Fund (CRF), implemented in 2008–09, is a community-driven financial mechanism that empowers local households to reduce vulnerability to climate and disaster risks. Operating as a community-owned system, members pool their savings and developmental funds to provide flexible, low-interest microloans for resilience-building investments such as climate-smart agriculture and flood-resilient housing. Only women are eligible to apply for loans, strengthening their role as financial decision-makers within households. All disbursements align with locally drafted, climate-adapted

plans to ensure relevance and accountability. Loan repayments are continually reinvested, sustaining a revolving cycle of savings, investment, and community resilience.

The model works because community ownership is embedded from the design stage itself – women's collectives decide who receives the loan and for what purposes, building both financial literacy, social cohesion, and decision-making capacity in the process.

▶ **Parametric insurance** provides rapid, predictable payouts to households when pre-agreed weather or climate disaster thresholds are crossed, without requiring extensive claims documentation or damage verifications. Unlike traditional insurance, parametric triggers (e.g., consecutive days above a pre-set temperature benchmark) can enable rapid automatic disbursement. For informal workers and vulnerable households that are typically also excluded from conventional insurance products, these mechanisms can provide rapid liquidity before families resort to other distress measures (e.g., asset sales). Examples include:

- In India, the Self-Employed Women's Association (SEWA) is piloting parametric heat insurance that automatically triggers payouts when extreme heat persists for two consecutive days. Covering women informal workers—from farmers to waste recyclers—each participant contributes INR 250 (US $3) annually, partially subsidized by philanthropic partners. When temperatures exceed 40°C, all insured women receive INR 400 (US $4.80) in direct cash assistance, providing immediate compensation for lost wages, even

before formal claims are processed.

- Similarly, SEEDS, in partnership with the Tamil Nadu Consumer Education and Development Foundation (TAMCED), is piloting parametric cyclone insurance in coastal Tamil Nadu. Communities receive automatic payouts once pre-agreed storm thresholds are breached—ensuring that support arrives rapidly and predictably to those most affected.

These pilots build on existing trusted networks, such as SEWA's decades-long relationships with informal workers, and because philanthropic funds make premiums affordable, allowing samaaj and bazaar to come together to create viable market-oriented insurance products.

▶ **Catastrophe bonds** transfer disaster risk from government to capital markets, providing rapid fiscal relief when predefined triggers are met. Unlike traditional insurance that requires extensive damage assessment, parametric triggers (e.g., flood or cyclone intensity) enable rapid payouts. Examples include:

- Jamaica's USD 150 million catastrophe bond, issued in 2024 with the support of the World Bank, provides financial protection against hurricane losses through 2027—covering four hurricane seasons. Unlike its first donor-funded CAT bond in 2021, this second issuance was fully financed by Jamaica, with investors—mainly from North America and Europe—purchasing the bond. If no qualifying event occurs, the bond functions like a standard investment instrument, returning the principal to investors by December 2027 with an annual interest rate of about 7 percent. If a hurricane of sufficient intensity strikes, however, payouts of 30 to 100 percent of the bond's value are made to Jamaica, depending on the storm's severity and path.[43]

The above example is directed at building national financial capital as a fiscal buffer. A similar model could be tried by local governments and non-government actors, though realising its full potential requires integration with community-level distribution mechanisms to ensure payouts reach affected households.

▶ **Pre-positioned funds** that pool together resources from multiple donors in advance of disasters and streamline disbursement to make funds available to Civil Society Organizations rapidly and with limited constraints on how these funds can be utilized. All others have some traction, but these by far are the majority of users. Examples include:

- In South and Southeast Asia, the Start Ready fund has pooled together funds from multiple donors and pre-positioned them for qualified CSOs to access when pre-defined disaster thresholds are met. Based on advanced planning, it precludes the need for CSOs to undertake post-disaster grant applications, which can take several weeks for approval and disbursement, to within hours of the disaster striking (see spotlight in figure 12 for more details).

- In India, SEEDS is piloting a pooled fund that can help communities recover from disaster impact rapidly. Using the Akshvi platform as a marketplace, the fund allows communities to indicate the recovery support they need and receive aid directly into their digital wallets. A similar pooled pre-committed fund leveraging local and national donors is being planned by ADRA to enable rapid fund release for anticipatory disaster response.

These mechanisms build financial capital for rapid liquidity while strengthening social capital as the platform connects community needs to available resources.

Figure 12: Start Ready provides pre-positioned, anticipatory funding that is automatically released when pre-defined disaster thresholds are met.

ABOUT

Start Ready provides pre-positioned funding, pooled across donors, that is released as anticipatory aid for crises that occur in a regular and predictable patterns (e.g. seasonal floods, droughts, heatwaves). This aid is released to qualifying NGOs in response to pre-aligned climate disaster thresholds.

HOW IT OPERATES

1. Build plans: CSOs use risk models and historical data to identify hazards, set danger thresholds, and develop contingency plans in consultation with communities.

2. Pool funding: Donors contribute funds in advance that are pooled together to maximize coverage across countries. This enables support for up to 4x more people than isolated reserves.

3. Deployment: If risk thresholds are breached, funds are released immediately to local NGOs. They implement pre-agreed actions like cash transfers or evacuations.

STAKEHOLDERS INVOLVED AND ROLES

Start Network: Design, deployment, and management of the fund.

Community: Co-design disaster response plans with CSOs

CSOs: Data validation, disaster planning, and relief distribution

Government: Offer data and align on disaster plans

Donors: Provide pre-arranged capital, and pre-approve proposals

Figure 12 (continued)

IMPACT METRICS

For Cyclone Remal in Bangladesh, anticipatory action was triggered 48 hours before landfall

£180 K released through Start Ready to support 30K people

64% of households reported no asset losses or damage

REASONS FOR SUCCESS

1. Rapid decision making: Clearly defined process that enables members to align on allocations and finalize funding decisions within 72 hours of crisis alert.

2. Flexibility for fund deployment: In built flexibility on allocating funds, supporting underfunded smaller scale crises, and disbursing the funds.

3. Government and community engagement: Community engagement helps develop disaster plans that meet local needs while government alignment ensures efforts complement government plans.

Source: Start Network, Start Ready – How it Works, 2022

ENABLING ENVIRONMENT THAT MADE THIS POSSIBLE :

1. Open access to government climate data to create risk models, set risk thresholds

2. Regional and national funders willing to pool funds for use in line with the broader objective of the fund rather than their own mandates
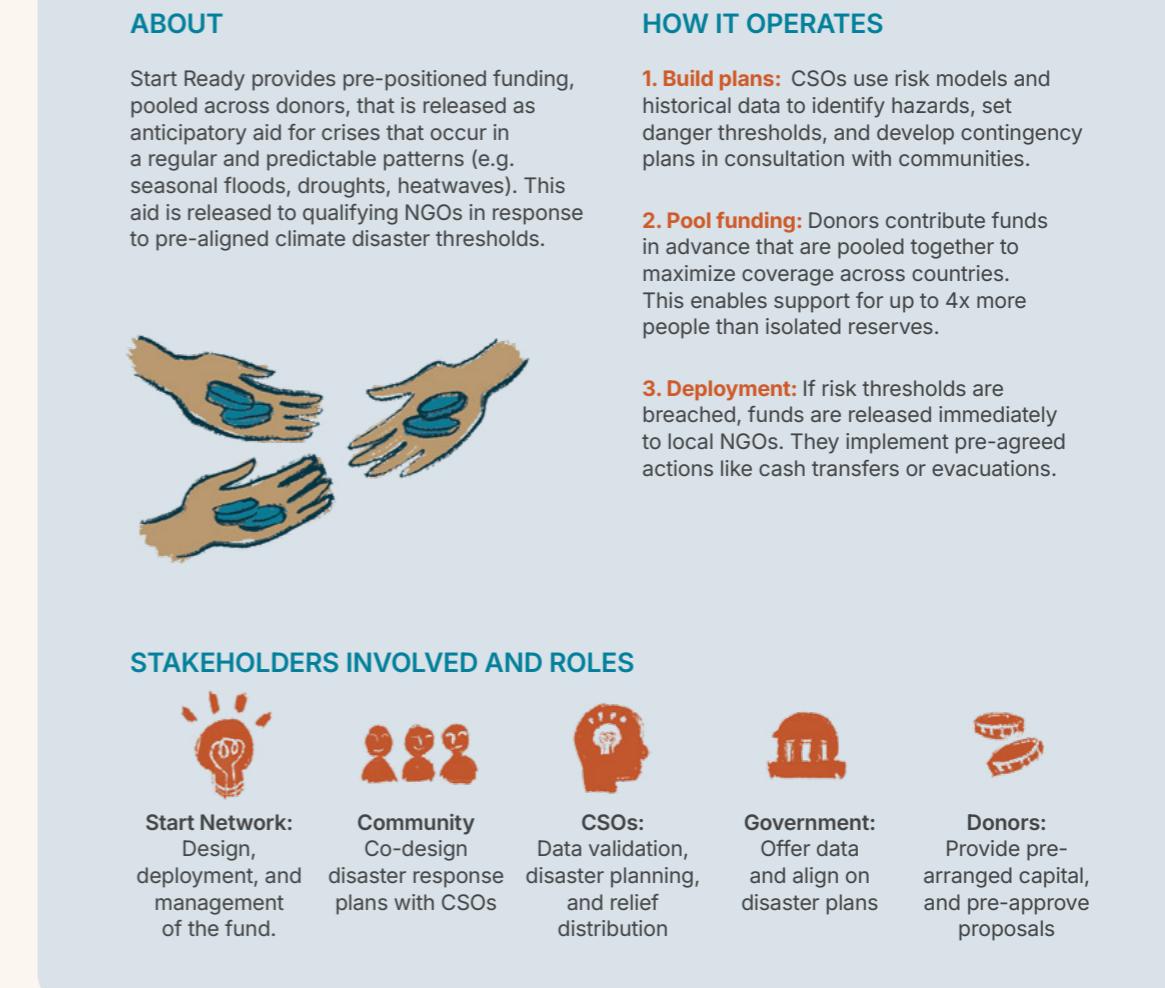
2. Capacity and relationships:

At the core of every resilient system lies a capable, skilled and connected community. This dimension encompasses the civic muscle of communities, such as their ability to organize, lead, and sustain collective action, as well as the connection between communities, CSOs, and governments. Capacity building can further enable communities to prepare, self-organize, develop, and implement disaster management plans relying on support and expertise developed within the communities over time. Some approaches and examples that emerged during our research include:

▶ **Community - led disaster management planning** efforts can help build local leadership for preparedness and response, as well as help communities develop specific action plans to put into place when climate disasters strike. These can take the form of setting up and operationalizing Village Disaster Management Committees (VDMC), providing technical assistance to undertake specific planning efforts, or creating specialized teams to coordinate responsibilities like evacuation and first aid. Examples include:

- Centro Humboldt in Nicaragua has helped set up more than 5000 Community Water Committees (CWCs) and developed an integrated system of training local volunteers to undertake risk planning, develop disaster management plans, and mobilize rapidly if disasters strike (see spotlight in figure 13).

- Poorvanchal Grameen Vikas Sansthan (PGVS) has supported rural communities in Uttar Pradesh in India to organize themselves into specialized teams responsible for carrying out rescue and relief activities. As part of the initiative, members of the Village Disaster Management Committees were trained to mobilize and lead relief operations including search and rescue, administering first aid, and coordinating evacuations to safe shelters. The capacity building was done via regular mock drills and capacity-building exercises to ensure that communities were ready to respond swiftly and effectively during floods. The initiative contributed to the achievement of zero flood-related fatalities in the 95 villages covered as part of the project.

- GeoHazards India worked with institutions that serve persons with disabilities to help them develop tailored disaster preparedness plans and provide hands-on training in disaster response. This includes building their capacity to map their institutions' hyperlocal risk profile - including geographic location, environmental risk factors, and the specific disabilities of their constituents – and developing specific response strategies to support these vulnerable segments.

Figure 13: Centro Humboldt undertakes local level risk planning and implementation of resilience activities in Nicaragua by working with communities
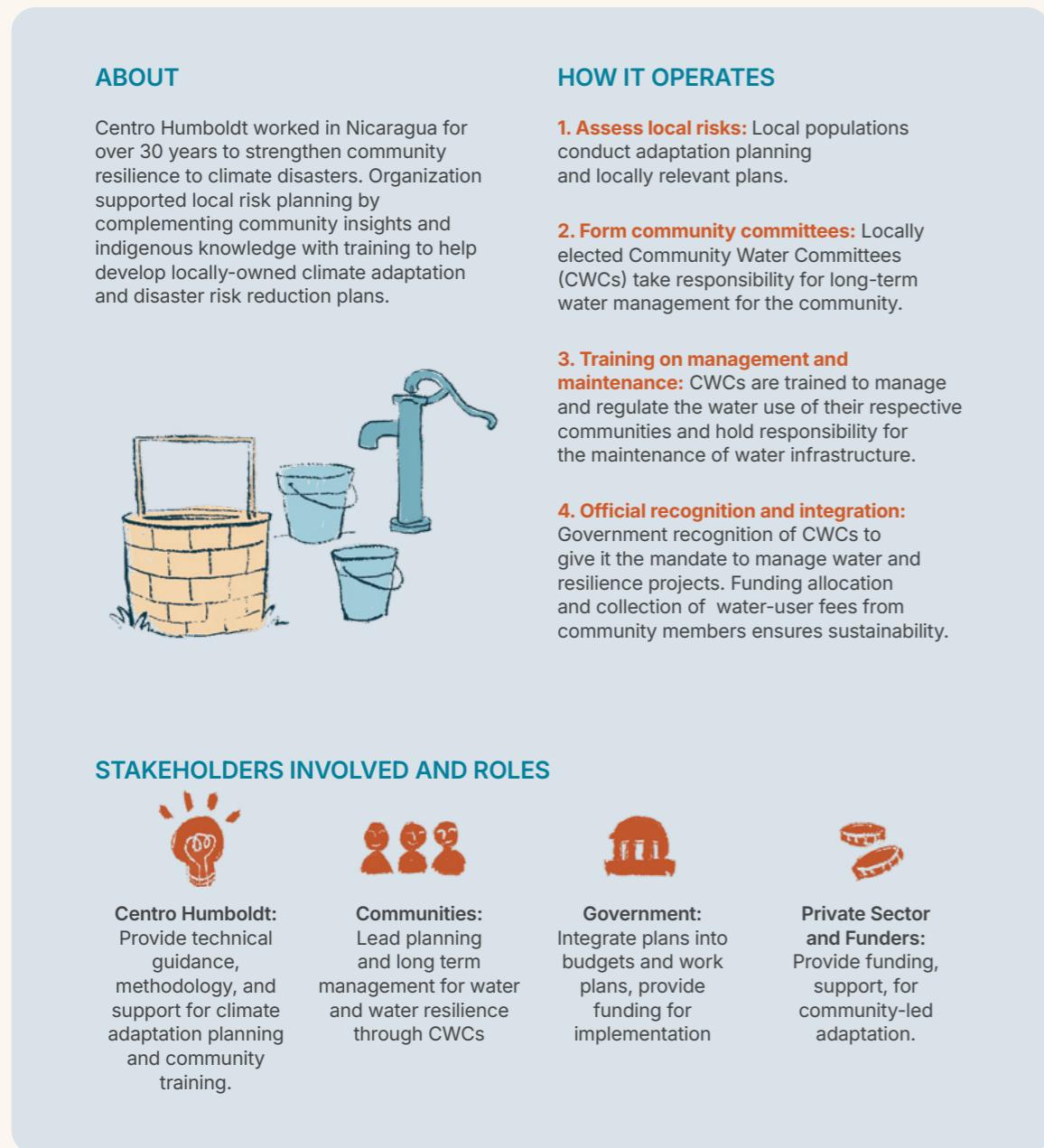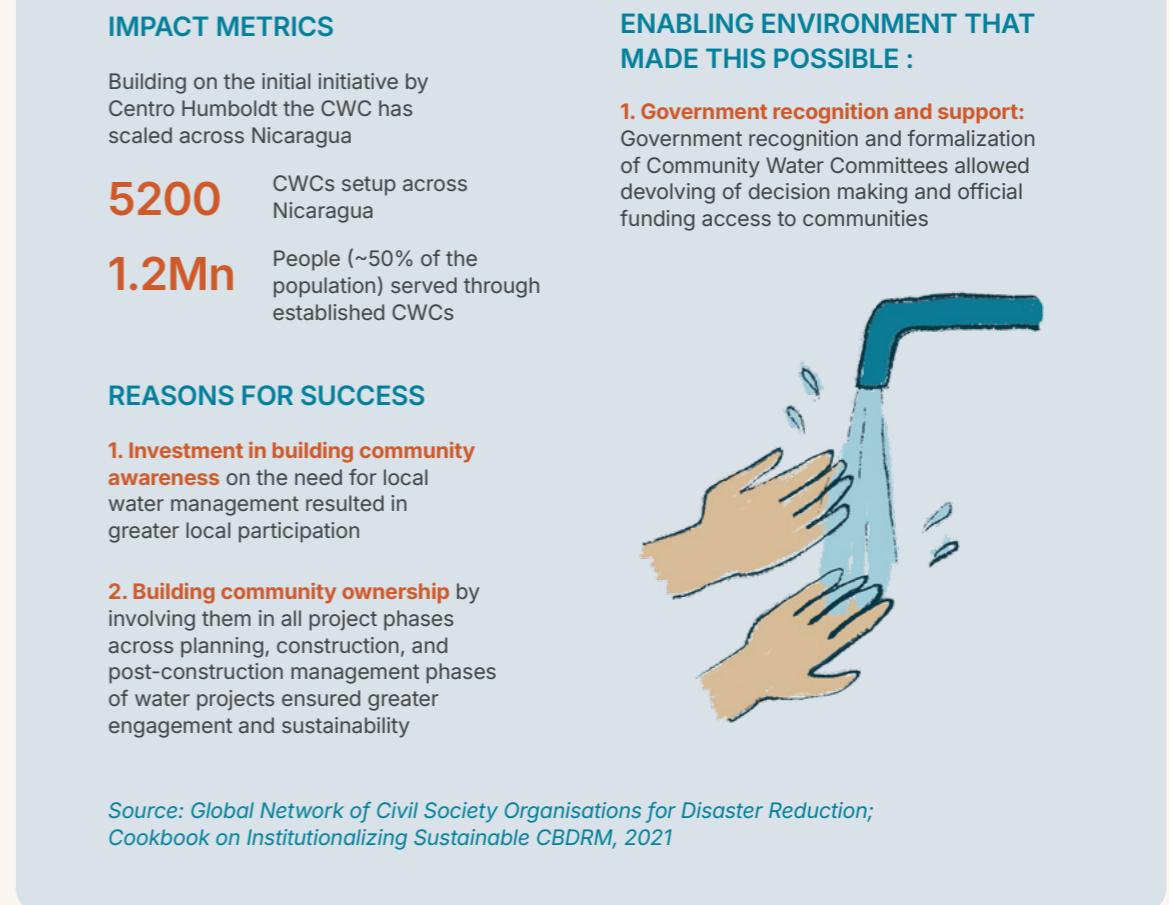
ABOUT

Centro Humboldt worked in Nicaragua for over 30 years to strengthen community resilience to climate disasters. Organization supported local risk planning by complementing community insights and indigenous knowledge with training to help develop locally-owned climate adaptation and disaster risk reduction plans.

HOW IT OPERATES

1. Assess local risks: Local populations conduct adaptation planning and locally relevant plans.

2. Form community committees: Locally elected Community Water Committees (CWCs) take responsibility for long-term water management for the community.

3. Training on management and maintenance: CWCs are trained to manage and regulate the water use of their respective communities and hold responsibility for the maintenance of water infrastructure.

4. Official recognition and integration: Government recognition of CWCs to give it the mandate to manage water and resilience projects. Funding allocation and collection of water-user fees from community members ensures sustainability.

STAKEHOLDERS INVOLVED AND ROLES

Centro Humboldt: Provide technical guidance, methodology, and support for climate adaptation planning and community training.

Communities: Lead planning and long term management for water and water resilience through CWCs

Government: Integrate plans into budgets and work plans, provide funding for implementation

Private Sector and Funders: Provide funding, support, for community-led adaptation.

Figure 13 (continued)

IMPACT METRICS

Building on the initial initiative by Centro Humboldt the CWC has scaled across Nicaragua

5200 CWCs setup across Nicaragua

1.2Mn People (~50% of the population) served through established CWCs

REASONS FOR SUCCESS

1. Investment in building community awareness on the need for local water management resulted in greater local participation

2. Building community ownership by involving them in all project phases across planning, construction, and post-construction management phases of water projects ensured greater engagement and sustainability

Source: Global Network of Civil Society Organisations for Disaster Reduction; Cookbook on Institutionalizing Sustainable CBDRM, 2021

ENABLING ENVIRONMENT THAT MADE THIS POSSIBLE :

1. Government recognition and support: Government recognition and formalization of Community Water Committees allowed devolving of decision making and official funding access to communities

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▶ **Community-led resource stewardship** that relies on communities' indigenous knowledge of their environment as well as skills available within the communities to restore or reconstruct ecosystem buffers, create disaster-resilient housing, etc. Examples include:

- Watershed Organization Trust (WOTR) works with rainfed villages across central and western India to build awareness and implement adaptive measures for water conservation as well as watershed development. The organization engages communities in understanding and developing strategies to judiciously use shared water resources in the face of climate disasters and climate change. Communities are trained and equipped to self-manage shared water resources through joint communities with representation from different population segments (e.g., women, Dalit representatives), create and design water management solutions, and adopt traditional practices for watershed development.

- SEEDS has initiated programs in Nepal and India to enable communities to reconstruct disaster-affected homes using designs and materials that are disaster-resistant. By adopting a people-led approach that trains local mason groups in implementing disaster-resilient designs and making homeowners aware of these designs, the organization has facilitated the creation of more than 26,000 disaster-resilient homes so far (see spotlight in figure 14).

Figure 14: SEEDS works with local mason communities and homeowners to build disaster-resilient housing
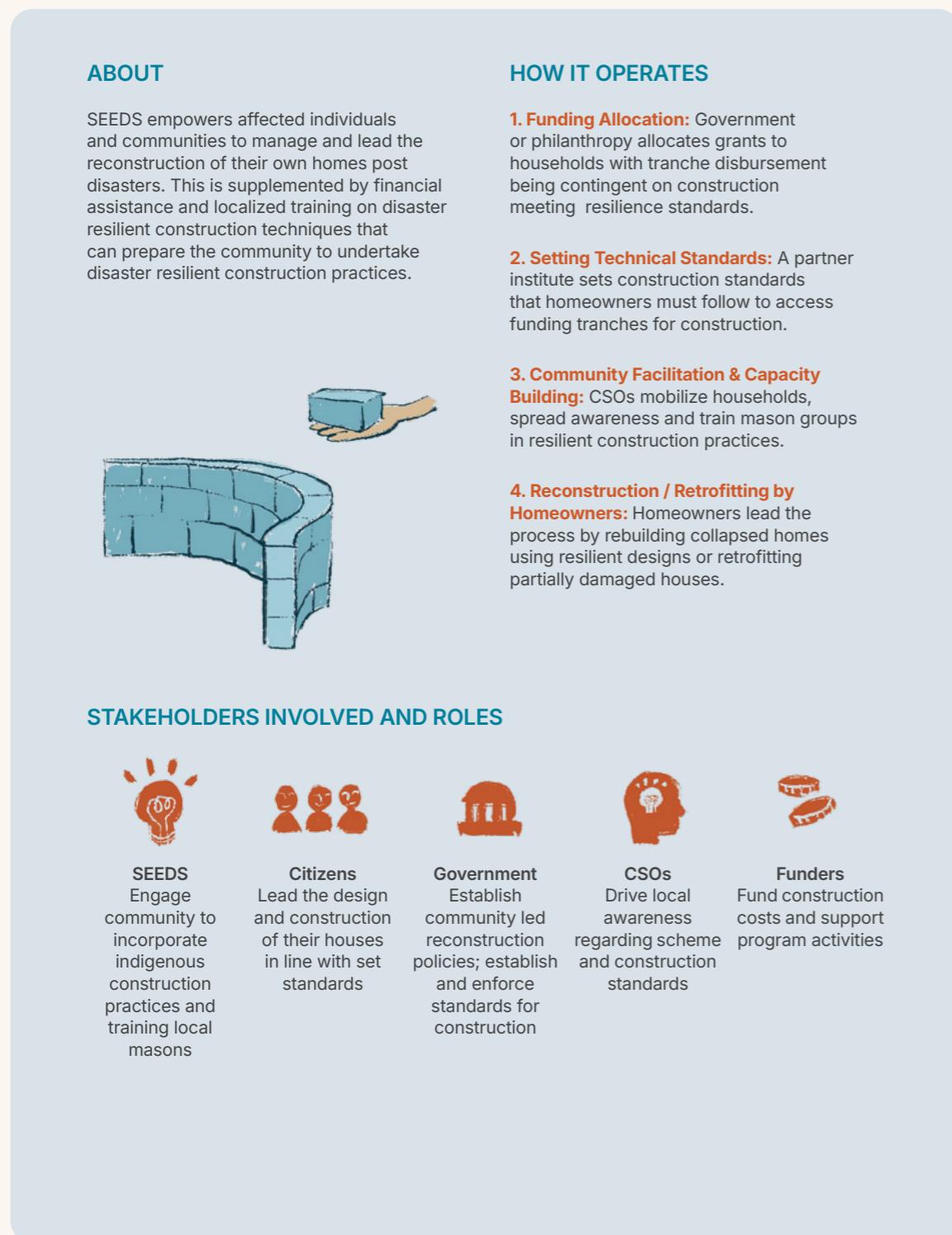
ABOUT

SEEDS empowers affected individuals and communities to manage and lead the reconstruction of their own homes post disasters. This is supplemented by financial assistance and localized training on disaster resilient construction techniques that can prepare the community to undertake disaster resilient construction practices.

HOW IT OPERATES

1. Funding Allocation: Government or philanthropy allocates grants to households with tranche disbursement being contingent on construction meeting resilience standards.

2. Setting Technical Standards: A partner institute sets construction standards that homeowners must follow to access funding tranches for construction.

3. Community Facilitation & Capacity Building: CSOs mobilize households, spread awareness and train mason groups in resilient construction practices.

4. Reconstruction / Retrofitting by Homeowners: Homeowners lead the process by rebuilding collapsed homes using resilient designs or retrofitting partially damaged houses.

STAKEHOLDERS INVOLVED AND ROLES

SEEDS
Engage community to incorporate indigenous construction practices and training local masons

Citizens
Lead the design and construction of their houses in line with set standards

Government
Establish community led reconstruction policies; establish and enforce standards for construction

CSOs
Drive local awareness regarding scheme and construction standards

Funders
Fund construction costs and support program activities

Figure 14 (continued)

EVIDENCE OF SUCCESS:

26,000+ houses rebuilt in Gorkha district of Nepal after the 2015 earthquake

100 masons trained and earning a living in Bihar after SEEDS interventions

ENABLING ENVIRONMENT THAT MADE THIS POSSIBLE :

1. Facilitating Policy environment: Adoption of a decentralized reconstruction policy by state governments, with Government led oversight on compliance with standards.

REASONS FOR SUCCESS

1. Cross sectoral partnerships: Collaboration between organizations that can anchor reconstruction initiatives and train masons, CSOs that can build local awareness and architectural experts helped develop appropriate designs and incorporate use of local material

2. Ability to meet user needs: The flexibility of homeowners to build houses that meet their specific needs, lead to higher community acceptance

3. Data, information, and learning

Building resilience depends fundamentally on the availability of relevant, timely, and actionable information that communities and practitioners can act upon to understand risks, anticipate disaster events, and coordinate response. Hyperlocal data or information and tech-led solutions that enable information sharing represent important interventions to aid community building resilience. We identified three different types of Samaaj-led solutions linking to the relevance of data, the type of information being shared, and technology interventions that can make information exchange seamless:

▶ **Community-led or anchored early warning systems** can help provide contextualized, timely, and effective warnings to communities. This includes identifying local risk signals (e.g., water level rise), adapting them into actionable warnings that contextualize action in practical terms, and disseminating them via relevant and trusted channels to community members. Examples include:

- Caritas India is facilitating transboundary flood collaboration between India and Nepal by establishing systems for continuous information sharing and community-level coordination. The initiative enables riverine communities across both countries to collect and share water level data using locally installed and maintained sensors. Designated community personnel in upstream communities alert downstream counterparts when water levels increase through text messages and phone calls, thereby providing a window for proactive action. To ensure that these communication systems remain relevant and trusted, regular virtual meetings, data exchanges, and preparedness messages are exchanged between communities.

The pilots have proven to be effective based on sustained CSO facilitation across borders, community ownership of monitoring infrastructure, and the trust built between upstream and downstream communities.

▶ **Citizen-powered mutual aid platforms** can leverage technology to match community needs with resources in real time. While formal response systems are often bound by standard operating procedures (SOPs) or can take time to mobilize, these platforms can support communities to self-organize and mobilise resources before external aid becomes available. Examples include:

- PetaBencana in Indonesia is a community-powered platform that enables decentralized disaster relief through technology and data. During crises, individuals can self-report their needs using simple online forms, which are then mapped in real time on a public platform. This information is accessible to local citizens, allowing them to quickly match urgent needs with available resources. The platform also tracks and facilitates the borrowing and returning of essential items, such as boats, stoves, and first-aid kits, creating a rotating pool of lifesaving assets. By digitally connecting people and expanding networks of solidarity, PetaBencana leverages social capital to build an organized and responsive system of mutual aid (see spotlight in figure 15).

The solution effectively builds on communities' own culture of mutual cooperation and complements it with digital infrastructure to strengthen existing social networks and ties.

Figure 15: PetaBencana, a crowd-sourced, localized, hyperlocal risk mapping platform

ABOUT

PetaBencana is a real time disaster mapping platform in use in Indonesia and Philippines. It uses verified, crowd-sourced reports to inform residents, civil society, and government actors about ongoing disasters and areas of high risk. The goal is to promote shared situational awareness and risk identification and empower rapid, coordinated action in urban crisis scenarios emergencies[1].

HOW IT OPERATES

1. Identifies possible risks: The publicly accessible platform identifies potential disaster information through bots integrated into social media and communication platforms.

2. Prompts reporting by citizens: A humanitarian chatbot automatically engages with users posting about disasters to collects verified details.

3. Facilitates verification by Government: Information shared is verified by the local government.

4. Makes data accessible: The real time disaster maps are made available to residents, civil society, and government actors.

STAKEHOLDERS INVOLVED AND ROLES

Yayasan Peta Bencana
Leads technology development, platform maintenance, and capacity building

Citizens
Report incidents via social media and messaging apps

Government
Verify and amplify disaster alerts; use insights for shaping real-time response

CSOs
Drive local awareness and mobilize people participation

Funders
Provide funding for platform development and maintenance

Figure 15 (continued)

IMPACT METRICS

In flood peaks, the platform sees 21,000% increases in daily views from baseline rates, showcasing its reach and usage[2]

REASONS FOR SUCCESS

1. Built around user habits: The platform taps into existing community behavior of sharing disaster updates on social media and supplements it with a user friendly chatbot

2. Built for Scale: Platform uses free, open-source software and integrates with existing popular platforms like WhatsApp, thereby avoiding high costs and maintenance issues

3. Validation and formal recognition: Verification of the risk data by the government evoke trust and acceptance in the local population

1. PetaBencana 2. Peta Bencana Aid, UN 3. How Peta Bencana is Turning Millions of Indonesians into Disaster Reporting Champions, Berdaya Hub

ENABLING ENVIRONMENT THAT MADE THIS POSSIBLE :

1. Presence of uninterrupted connectivity that allowed usage even during disasters

2. Investment in technology and platforms that brought together people and government to share data and allow its validation

▶ **Open source and digital tools** that democratize access to hazard and vulnerability can help CSOs support local governments and communities with long-term planning to anticipate risks and take appropriate actions. Other digital tools can transform disaster response operations to enable seamless information sharing, digitize operations, and provide decision makers with real-time insights to plan or direct disaster recovery efforts. Examples include:

- Platform for Real-time Impact and Situation Monitoring (PRISM) is a climate risk monitoring and data management system designed to inform disaster preparedness and resilience investments in Jakarta and similar urban settings. Developed by the World Food Programme (WFP) in collaboration with local and national stakeholders, PRISM integrates geospatial hazard data such as floods, storms, droughts, and earthquakes with socioeconomic vulnerability metrics to generate actionable, evidence-based insights for rapid decision-making. Open-source and accessible even to non-technical users, PRISM is officially recognized as a digital public good. Its integration of diverse datasets, from meteorological inputs to field-level social reports, supports scenario building, disaster simulations, and targeted adaptation planning.

- Emergency Response Team (ERT) partnered with the South African Red Cross Society (RCSA) to transform disaster response operations during the 2022 KwaZulu-Natal floods. The collaboration digitized field operations by replacing paper-based reporting with a real-time, integrated platform, enabling faster, more coordinated, and data-driven relief across affected communities. RCSA gained instant access to operational dashboards and field data. At the same time, open-source data collection platforms designed for humanitarian action

allowed teams to collect information even in areas without network coverage. Automated reporting, coordination, and resource tracking gave decision-makers accurate, real-time insights into communities' needs, progress, and gaps.

4. Narratives:

For resilience to become sustainable, it needs to be embedded in the collective belief and actions of people. Through local campaigns, stories, and dialogues, CSOs are helping communities understand risks and take small everyday actions that build resilience over time. These conversations also help shift how leaders and institutions think about resilience, making it a shared social goal rather than just a policy agenda. Approaches that emerged during our research are laid out below:

▶ **Mass awareness campaigns** that are directed at shifting population-level behaviour through sustained communication over a long period of time. Examples include:

- Vietnam's National Week for Natural Disaster Preparedness and Control is an annual awareness campaign held each May, ahead of the cyclone season, and has been observed since 2019. While not led by CSOs, it deeply involves civil society. The initiative is spearheaded by the government that mobilizes its own agencies, media, and civil society to build awareness, strengthen preparedness, and foster a culture of disaster resilience amid the country's exposure to floods, typhoons, droughts, and other climate hazards. Television, radio, and national print coverage (targeting both rural and urban zones) deliver daily messages on disaster risks, safety measures, and benefits of preparedness, while interactive activities such as flood-resilient housing competitions and disaster response drills are undertaken widely.

The media also highlights local disaster experiences, showcasing stories of resilience and encouraging positive behavioral shifts (evacuation planning, safe shelter, health precautions). As a result, in a survey conducted across 142 countries in 2023, 83% of households in Vietnam said they had plans in response to emergencies relating to natural disasters, higher than the global average of 38%.

▸ **Community-led advocacy** can enable local populations to document their own realities and use that evidence to shift policy. When communities generate the data and seek to understand it, they also develop a deeper understanding of their situation and can find or leverage their political voice to push for change.

- ASAR works in different disaster-impacted regions to support local institutions collect relevant disaster data and drive advocacy efforts for policy shifts and narrative changes. In flood-affected districts of Ernakulam, Kerala, ASAR worked with Equinoct to help residents recognize the impact of tidal flooding, engaged local community members—including Kudumbashree, ASHA, and MGNREGA workers—to systematically document flooding data on ward-level calendars, create tidal maps highlighting high-impact areas, and capture videographic evidence. By visualizing and tracking the growing extent of flooding themselves, communities were able to better understand the risks and advocate for stronger preparedness and response measures. The locally led advocacy efforts of these groups ultimately prompted the district government to formally recognize tidal flooding as a disaster and allocate funding for mitigation measures and compensation for affected families.

⭐ **Across the above innovations, the pattern is clear. Resilience-building innovations succeed when they leverage existing social infrastructure, are owned by communities, and are supported by patient and flexible funding.**

The innovations documented above exhibit several common patterns in what enabled their success across diverse contexts. These include shared ownership of communities across both design and outcomes, leveraging existing social infrastructure, long-term investment in building community awareness and engagement, and flexible trust-based use of resources. Figure 16 lays out the critical enabling factors that contributed to the successful rollout of some of the pilots covered above.

Figure 16: Enabling factors mapped across some of the prominent samaaj-led disaster resilience pilots

Enabling factor	Community ownership of decisions	Builds on existing social infrastructure	Long-term CSO engagement	Women's leadership embedded
SEWA				
SEEDS	✓	✓		✓
PGVs	✓	✓	✓	✓
Geo-Hazards		✓	✓	
WOTR	✓	✓	✓	✓
Caritas	✓	✓	✓	✓
ASAR	✓	✓	✓	✓

Lessons for philanthropies

The above examples and success factors point to a distinct and catalytic role for philanthropy in bringing the community - centric resilience to life. Several lessons emerge in terms of enabling shifts that philanthropies can anchor on to support resilience building:
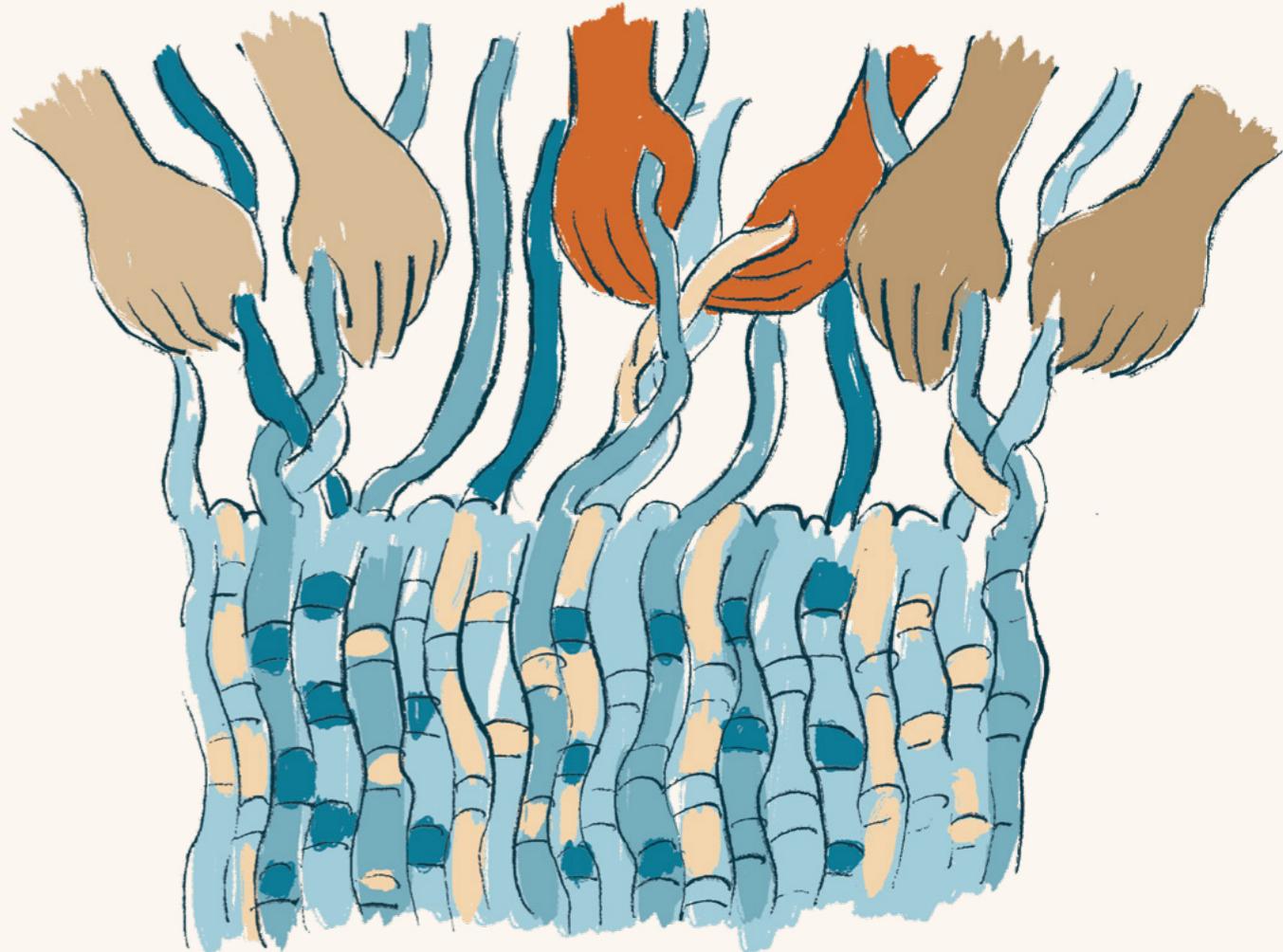
▶ Fund preparedness, not just response as innovations with deepest impact often seek to invest in building community capacity before disasters strike.

▶ Provide flexible, trust-based grants that are prepositioned and allow communities or CSOs to leverage these funds based on hyperlocal factors. Process can otherwise become the enemy of what is needed on ground,

▶ Move beyond physical infrastructure to invest in creating social infrastructure such as village disaster management committees

or other networks between communities and local governments.

▶ Support CSOs as long-term partners as resilience building takes time and short project cycles do not make innovation or achievement of true community centricity possible.

▶ Support experimentation and innovation as few other actors with the funding availability (government or private sector) have the risk appetite and patience to back true game-changing innovations.

▶ Support narrative change by helping communities see themselves as agents, and policymakers see community-led approaches as credible.

Despite the growing number of proof points around what effective resilience building looks like in practice, systemic barriers continue to impede its scale-up on the ground. Fragmented governance, short-term funding cycles, limited

coordination between institutions, and insufficient localization of decision-making leave innovations isolated and without a clear pathway to their implementation across communities. We explore these challenges in the next chapter.

Key takeaways

▶ Innovative financing mechanisms such as parametric insurance (SEWA), community revolving funds (Cambodia), catastrophe bonds (Jamaica), and pre-positioned funds (Start Ready), are already demonstrating how financial capital can reach communities rapidly and flexibly.

▶ Community-led disaster management planning, as piloted by organizations like PGVS and Centro Humboldt, has shown transformative outcomes such as zero flood-related fatalities when communities are trained and empowered to lead.

▶ Technology-enabled platforms like PetaBencana and PRISM show how citizen-powered data, mutual aid coordination, and open-source risk mapping can complement formal response systems.

▶ Narrative and advocacy efforts, such as ASAR's community-led documentation of tidal flooding in Kerala, can shift policy attention and unlock resources for previously invisible hazards.

▶ Successful climate disaster resilience innovations share common enablers: community ownership of decisions, building on existing social infrastructure, long-term CSO engagement, and women's leadership embedded in the approach.

04

Awaiting Acceleration

Why community-centric resilience has not scaled

India has made important strides in strengthening disaster response capabilities and embedding elements of community-centric resilience into policies, frameworks, and state programmes. As earlier chapters noted, states such as Odisha and Kerala provide powerful examples of how locally rooted preparedness, strong coordination between communities and government, and investment in collective leadership have significantly reduced mortality and strengthened early action. Initiatives across the country, from community-managed cyclone shelters and resilient housing to women's collectives mobilising for preparedness, demonstrate what community-led resilience looks like in practice:

▸ In many CSO-led pilots, women's collectives and self-help groups now coordinate preparedness activities, manage water and food stocks, and support evacuation.

▸ PRIs and ward committees in states like Odisha, Assam, and Kerala increasingly shape preparedness and response plans.

▸ Local CSOs and academicians are leading programs, often in partnership with corporate actors and technology companies, to co-design impact-based early warning messages and lead community-led risk mapping.

▸ Many actors, supported by philanthropies and multilaterals, are conceptualizing innovative parametric insurance pilots and hyperlocal loss-reporting platforms

National policy too has increasingly recognised the importance of communities as central actors. The National Disaster Management Plan (NDMP 2019) explicitly situates Panchayati Raj Institutions (PRIs) and local communities at the heart of disaster preparedness, response, and recovery, emphasizing a participatory approach towards building disaster resilience.[46] It mandated the development of Village Disaster Management Plans (VDMPs) through community consultations.[47] India has also taken steps toward inclusive and equitable resilience. NDMA's Disability-Inclusive Disaster Risk Reduction Guidelines call for accessible early warning systems, evacuation routes, and relief processes.[48]

While implementation has been uneven, elements of this shift are visible on the ground. In cyclone- and flood-prone states, solutions increasingly rely on community ownership, from multipurpose shelters managed by local committees to NDMA's Aapda Mitra volunteer programme, which has trained thousands of local first responders.[49] School safety programmes and capacity-building initiatives by state disaster management authorities have strengthened human capital at the last mile.[50] The Pradhan Mantri Fasal Bima Yojana (PMFBY) has expanded crop insurance coverage to millions of farmers, providing partial protection against climate-disaster-induced losses.[51] The MISHTI initiative (Mangrove Initiative for Shoreline Habitats & Tangible Incomes) reflects a growing focus on restoring natural capital by combining mangrove regeneration with livelihood creation.[52]

Yet despite this momentum, community-centric resilience remains fragmented, localised, and difficult to sustain. India ranked 67th out of 111 countries on the 2021 Resilience Index, reflecting gaps across individual, household, community, and systemic capabilities.[53] For the most part, communities are still peripheral to resilience-building efforts and are yet to become primary owners and drivers of their resilience. While their roles tend to be strongest during emergency response (e.g., via Aapda Mitra mobilization or of their own accord), there is limited participation in anticipatory action, long-term adaptation, mitigation, or recovery planning. Likewise, ecosystem restoration efforts, though promising, remain localized and lack cross-sectoral coordination to scale impact.

❊ The disaster management system has not kept pace with the new climate normal. While the system is evolving, three interconnected failures explain why proven community-centred approaches remain proof points and are yet to be mainstreamed.

Attention, design, and relational failures rooted in disaster management approaches suited for singular events and not today's climate normal constrain community resilience building. These failures prevent scale-up of community-rooted and proven approaches for resilience building:

1. Attention failure that narrowly focuses on mortality reduction and makes other impacts that erode household resilience – such as livelihoods destroyed, impacts on health and well-being, erosion of financial buffers – invisible to the system actors or commands lesser resources.

2. Design failure as India's disaster management system evolved to respond to rare, singular events demanding a centralised response, and is still evolving to respond to the new climate normal that comprises frequent, overlapping, and hyperlocal disasters of different types.

3. Relational failure where connection and collaboration between government, CSOs, philanthropies, and communities remain episodic and transactional rather than sustained engagement that allows all actors to coordinate and adapt together.

We discuss these failures below in more detail.

1. Attention failures: What gets measured and prioritised

Metrics that get measured attract attention – political, financial, and operational – and set accountability for what disaster management systems must deliver.

Across national, state, and district levels, attention continues to gravitate toward highly visible hazards, metrics, and moments. Through consultations, four dominant gaps emerged:

▶ **Focus is largely directed towards mortality reduction, in particular during large-scale events.**

India's achievements in reducing disaster mortality, especially in cyclones, are globally recognised. However, lives saved are now treated as the primary indicator of disaster performance. Political priorities and media narratives reinforce this focus. As a result, institutional energy is channelled toward large-scale evacuations and immediate response. This is also reflected in the financial allocations for disaster relief. The national disaster response fund allocates less than 30% of the funding to rebuilding or resilience efforts, with the rest earmarked for disaster response.

This narrow definition of success also limits on-ground focus on other essential dimensions of resilience, such as long-term livelihood recovery, adaptive and anticipator infrastructure, psychosocial well-being, etc. For example, after major cyclones in Odisha, national coverage celebrated the evacuation of over 1.2million people and the low number of deaths. Yet post-disaster assessments revealed that many affected families experienced weeks of food scarcity, limited clean water, and unsafe or temporary housing even three months after the disaster event.

These impacts received far less attention because they fell outside the dominant mortality metric narrative and media focus.[54]

▶ **Slow-onset, repetitive, and hyperlocal disasters receive limited recognition**

Fast-onset events (cyclones, large floods, cloudbursts) command attention because they are dramatic, visible, and politically salient. Practitioners highlighted that slow-onset or repetitive hazards often cause deeper and more enduring harm but receive far less recognition, except in isolated cases. These disasters include tidal flooding, multiple small floods in close succession, droughts, riverbank erosion, heat stress in urban areas, etc.

This invisibility has material consequences. For example, in several drought-prone regions, state governments hesitate to declare droughts because they do not meet "severity thresholds," leaving farming communities without timely compensation or relief.[55,56] In urban areas, heat stress disproportionately affects gig workers, construction labourers, and informal workers. Yet it remains under-recognised as a disaster, leaving millions without protection despite mounting evidence of lost wages and health impacts. Similarly, Assam recognised riverbank erosion as a disaster only recently, despite decades of families losing land, homes, and identity. The philanthropic sector too mirrors this pattern with funding surges during headline events but limited inflows for long-term resilience-building, slow-onset risks, or inter-disaster recovery.

▶ **Preparedness, adaptation, and recovery receive limited sustained attention**

India's disaster governance system was designed for a different era, one dominated by rare, large-scale catastrophes. As a result, attention overwhelmingly concentrates on immediate response and relief. Preparedness, anticipatory action, and long-term adaptation receive limited institutional mandate and sparse, unpredictable resources. Budget allocations mirror this reality: funds for response and relief dwarf allocations for preparedness and recovery in many states.

In practice, this means communities repeatedly experience "attention cliffs": high engagement during the crisis, followed by a rapid fall-off once the event is over, even though recovery and rebuilding take months or years.

▶ **Marginalised groups remain institutionally invisible**

Institutional attention moves toward areas with media coverage, or where constituencies are politically significant or generate public pressure. As a result, equally severe but less visible impacts on marginalised groups remain unseen. These include migrant workers in informal settlements who may not represent a significant political constituency, transgender communities excluded from formal shelters, Dalit households in riverbank erosion zones, or Adivasi communities in shrinking forests who often fall outside the attention frame.

2. Design failures: Where system response is misaligned

Even when the right issues receive attention, the response to the climate disaster fails to match the communities' realities, especially to continue to build resilience in the narrow window between disasters.

India's disaster systems are setup to respond to dramatic, rare events, but not the recurring hyperlocal climate disasters that communities face. India's disaster governance system reflects an older paradigm that was shaped by events such as the Odisha Super Cyclone (1999). Lack of early warnings, limited technical capacity, and catastrophic mortality rates meant that responding to such crises required rapid, centralised mobilisations involving state machinery with an overarching focus on healthand safety. However, the systems have evolved more slowly than the climate reality: decision-making remains top-heavy, planning accounts for large events rather than multiple smaller ones, and standardised procedures dominate over contextual judgements. In particular, practitioners point to five specific design gaps:

▸ Local institutions are expected to lead, but lack authority, resources, and functional capacity

PRIs, ward-level committees, and District Disaster Management Authorities are formally positioned as frontline leaders. But they often lack the authority, resources, tools, and knowledge, and capacity to make context-specific decisions. For example, village-level disaster management plans (VDMPs), which should be the backbone of community-centred preparedness, are often produced for compliance rather than as instruments that shape resource allocation. CSOs highlight that local leaders lack the capacity to construct these plans in a scientific way, and that these are rarely reflected in district-level planning. Similarly, DDMAs lack discretionary funds to shape climate adaptation and resilience activities in their districts.

▸ Early Warning Systems are technologically advanced, but not designed for community usability

India's early warning capabilities have significantly improved, but the design of warning communication remains misaligned with community realities. Alerts frequently describe rainfall warnings as alerts (e.g., an orange alert that describes 12-20 cm rainfall in a period of 24 hours) or river levels in metres. Most communities and households are ill-equipped to interpret these warnings into meaningful decisions. Our field interactions highlighted flood warnings that referred to rivers by names that were unfamiliar to local communities, resulting in limited acknowledgement of the warning. Communities need clear, actionable, impact-based messages that inform them whether they are at risk of water entering their homes and whether they should move to higher ground.

Many early warning systems are also overly reliant on digital dissemination. A recent study in Bihar found that communities missed flood warnings due to residents having switched off their location services

or due to poor network access. Such gaps reflect a lack of user-centricity in designing and communicating warnings, even though the technical ability to identify disaster risks has improved.

> *"Instead of saying 'X millimetres of rainfall,' alerts should explain the likely impact—such as flooding that could lead to several feet of water entering homes."*

▸ Compensation and financial recovery mechanisms underestimate real losses

Compensation is often based on norms that do not reflect actual asset values, inflation, or long-term livelihood loss. Post-Disaster Needs Assessments (PDNAs), although essential, frequently rely on outdated datasets. A 2022 NDMA assessment across eight states found that housing and agricultural baselines used pre-2015 data, producing inaccurate damage estimates and misaligned compensation.[57] Practitioners repeatedly noted that even under ideal conditions, government support rarely exceeds one-third of actual losses. Further, households without the land pattas, i.e., formal land titles, are excluded from compensation schemes and crop insurance.

> *"In our 2022 study across communities in Kerala, Assam, and Uttarakhand, we found that for every ₹100 lost during a disaster, even under ideal conditions, government relief covers only about 32–35% of that loss."*

> *"Current loss assessments are outdated, biased, and driven by public revenue loss rather than true community impacts. There is a major disconnect between real community losses and what's reported."*

▸ Long-term resilience efforts frequently overlook hyperlocal realities

Even well-intentioned climate measures do not reflect local risk profiles. A study of PMAY scheme (rural housing) found that more than half of the surveyed homes in Gujarat and Tamil Nadu were built in unsafe areas, without considering local topography, leaving families exposed to climate hazards. In many cities, urban local bodies follow standardised templates and miss opportunities to direct action where it is most needed, such as planting trees in pockets that are local heat islands.

▸ Philanthropic and CSR funding flows are often inflexible and tied to inputs rather than outcomes

Even for disasters, where resilience is a long-term measure and disaster response needs to be highly localized, philanthropic and CSR flows are often structured around input-based metrics. CSOs consistently report approval delays of several weeks or months that render funds ineffective for time-sensitive needs. When funds do arrive, they are tied to predetermined activities (e.g., rebuilding of infrastructure), leaving limited room to adapt to evolving community needs.

The pressure to produce visible, quantifiable outputs pushes implementers toward relief distribution or infrastructure development, even when communities may need livelihood support, psychosocial

care, or flexible cash assistance. The mismatch between funding structures and the rhythms of community recovery reduces the effectiveness of even well-intentioned interventions.

> *"It can take up to two months for proposals to be approved by philanthropies. By the time funds are released for food distribution, a month has passed. And by then, communities no longer need food, they need other forms of support."*

> *"Even for philanthropies or CSRs who claim to be community-centric, often the grants come in the form of pre-formed relief packages. These may not even be required by the community. The needs and cultural preferences differ from the mountains to the coastal belt, and so does the impact of the disaster. Actual flexible giving that allows implementors to really provide what communities need is rare and limited."*

> *"There are very few philanthropies that are truly focused on disaster management, and the few that exist are focused on disaster response rather than long-term resilience."*

▶ **Funding and institutional structures do not account for the periods between disasters.**

Resilience-building action is limited between disasters that leads to missed opportunities to strengthen the different capitals and processes that can help build community resilience. Between crises, hard-won capacities can erode. For example, trained volunteers can move away without continuous engagement, committee members may lose interestwhen no emergency looms, and early warning equipment may fall into disrepair without maintenance. More importantly, this is the window to build the resilience infrastructure, civic muscle of communities, and connective tissue between different actors, but it gets overlooked due to other priorities.

This gap is built into the current design of funding structures. Government budgets are structured around disaster response, with limited provision for sustained preparedness. CSR funding surges during headline events but can disappear during the quiet periods. Philanthropic grants typically run 12-18, months long enough to initiate efforts but too short to sustain them. The result is a system that either does not adequately focus on building community capacity between disasters or repeatedly invests in building such capacity in pockets but allows it to erode.

3. Relational Dynamics: How collaboration, trust, and information flow break down

Relational infrastructure to make community-centric resilience work in practice is missing. Interactions between communities, local government, donors, and other actors are largely episodic and transactional, even as resilience building requires deeper and sustained engagement between these actors.

Effective resilience is built on cooperation, trust, information exchange, and shared purpose between communities, government agencies, civil society, and funders. Yet practitioners repeatedly highlight that interactions between these actors remain largely transactional:

▶ **Fragmented governance weakens integrated action**

While India's formal disaster governance architecture lays out clear responsibilities across ministries and line departments, in practice, coordination between agriculture, water resources, health, rural development, housing, and disaster management remains limited. Line departments frequently pursue their mandates independently rather than through integrated planning, even in districts where crisis-response committees exist.

While DDMAs hold granular knowledge of local risks, they lack the formal authority to align, influence, or coordinate the actions of other departments except immediately in the aftermath of a disaster. This fragmentation is particularly evident when considering preparedness to holistically prepare communities against climate disaster shocks or even when responding to disasters like heatwaves that require coordination between labour, health, and urban development.

> *"The current disaster institutional architecture is fragmented - disaster management agencies operate separately from climate agencies and implementation departments- with little to no crossover of knowledge or practices."*

▶ **Government–CSO relationships are often transactional rather than collaborative**

Although civil society organisations have deep local presence and contextual understanding, their engagement with government often remains limited to implementation tasks such as distributing relief. CSOs consistently shared that they are not meaningfully involved in planning for disaster response or designing targeted schemes despite their proximity to vulnerable households. In several states, disaster declarations, relief distribution, or compensation processes are conducted without CSO involvement, even when CSOs have the ground-level information.

Many CSOs also face challenges accessing government data on hazard exposure, impacts, and vulnerable populations data that could strengthen their interventions and enable more targeted, adaptive support. This restricts their ability to provide high-quality feedback or participate in joint decision-making.

▶ **Community participation structures exist on paper but are underutilised**

India has established formal mechanisms for community participation - VDMP committees, ward-level committees, and school safety committees - but many of these structures are yet to be operationalized at scale. Where they exist, they meet infrequently, lack clear mandates, and have no budgetary support. Community members are consulted only during emergency response, particularly during evacuations, but are rarely engaged in preparedness, risk assessment, or long-term planning. This results in missed opportunities to embed community knowledge, mobilise local capabilities, and build accountability for long-term resilience.

▶ **Communication across actors is predominantly one-way**

Philanthropies and CSR actors often predefine interventions without listening to communities about what they need or how best to equip them to build long-term resilience. During our consultations, a CSO highlighted a philanthropic dairy initiative where communities in drought-prone areas were seeking support to acquire goats, as they are more resistant to droughts. However, the philanthropy insisted on providing cattle based on a standardised model that struggled to generate sustained impact. Similarly, another practitioner appreciated the efforts of CSR actors who were quick to mobilize relief kits during disasters in Himachal Pradesh but highlighted that in many cases the kits were assembled per a set template and included several items that the communities did not need or were not culturally appropriate (e.g., type of clothing).

▶ The civil society ecosystem itself is fragmented

CSOs working on climate change, disaster response, rural livelihoods, gender justice, and rights often operate in silos, despite working with the same communities and facing interconnected risks. Many organisations described having little opportunity for shared learning or collaboration to set joint agendas.

One CSO leader highlighted that their expertise in "analysing climate disaster data and trends" could be immensely helpful to other CSOs undertaking resilience-building efforts, but there were no forums to undertake such interactions or prepare joint programs. With limited platforms for coordinated action, the ability to undertake shared advocacy to shape district - or state - level resilience agendas also remains constrained.

Addressing the failures of attention, design, and relationships share a common feature: they cannot be addressed top-down, instead communities need to be at the centre.

Centralised systems lack the contextual knowledge, relational continuity, and adaptive capacity that resilience requires. Communities and the CSOs that work alongside them possess these qualities and can transform and lead resilience-building efforts:

▶ Communities have full visibility into disaster impacts: They experience the full arc of disaster impact- not just the headline event but the slow erosion of livelihoods, the repeated small shocks, and the invisible costs even before the system can notice or pinpoint them. When enabled to lean into their lived experiences, communities can make hyperlocal risks visible, surface long-tail impacts that institutions may overlook, and help broaden the definition of success from "lives saved" to "lives restored". This can be a crucial shift in bridging attention gaps from system actors (e.g., local or state governments).

▶ Solution design improves when communities are involved: As seen in the previous chapter, the involvement of communities can help create solutions that are responsive to hyperlocal contexts, culturally appropriate, and can be sustained. This includes helping make local warnings and communication relevant, identifying local infrastructure gaps, creating and maintaining local systems that work without disrupting communities' livelihoods, and restoring natural ecosystems.

▶ Communities can underpin the relational network: Even as political and donor priorities shift, communities maintain permanence through the entire lifecycle of the disaster, including the "in-between" periods when institutional attention reduces. Communities can maintain continuity of action, draw attention to challenges even when they are not top of mind, and become the anchor to continue and sustain collaboration between entities. In addition, they can help different government agencies to collaborate around shared agendas, create common ground with CSOs, and provide direct feedback to officials and donors on what works.

This case for community-centric resilience is not being made by practitioners alone. Government actors, too, are recognising the need to build grassroot-driven resilience.

There is growing emphasis within the Government for the need to build local capacity for disaster response and adaptation, as well as increased co-ordination within and between government agencies to improve disaster response:

Building state and local capacity

▶ Making Gram Panchayat Disaster-Resilient: NDMA, in partnership with the Ministry of Panchayati Raj, has launched a programme to make every Gram Panchayat (GP) disaster-resilient, starting with 139 GPs across 19 states. Each GP receives funds and guidance to address local hazards while district magistrates oversee implementation. The goal is to create demonstrative models that states can later scale using their own budgets.

▶ Glacier Lake Outburst Flood (GLOF) Mitigation Programme: NDMA has initiated a national Glacier Lake Mitigation Programme with global experts. The programme includes hazard mapping of at-risk lakes, installation of automated monitoring and early warning systems, engineering interventions such as controlled lake lowering, and community capacity building, with at least 10% of funds earmarked for local preparedness.

Improving inter-relational capacities and coordinated action

▶ Demand matching platforms: There is growing interest within government to collaborate with other stakeholders through demand-matching platforms that provide visibility into on-ground needs and clarify which support can be delivered by government versus non-government actors, ensuring alignment with community priorities.

▶ National Coordination Through Committee on Disaster Risk Reduction (CoDRR): NDMA has created the CoDRR to ensure coordinated action across key national agencies such as National Remote Sensing Centre (NRSC), Central Water Committee, Geological Survey of India, and state bodies. Originally formed for glacier lake mitigation, CODRR now supports integrated risk reduction for heatwaves, cyclones, monsoons, and urban flooding, strengthening India's ability to manage multi-hazard risks through unified planning and data sharing.

These initiatives signal growing recognition that localised, coordinated approaches are necessary. But scaling and sustaining them, requires patient, flexible, and risk tolerant capital that philanthropy is uniquely positioned to provide.

▶ **As covered above, despite proven models and growing policy recognition, community centric resilience is yet to scale in India.** The barriers are structural: failures of attention leave long-tail impacts invisible; failures of design impose standardised solutions on varied local realities; and failures of relationships keep coordination episodic.

▶ **Governments and markets have a key role to play but may not be well-positioned to embed the trust based work and community capacity building that is required.** Innovative policy measures can help governments to drive a grassroots oriented vision for resilience. The associated funding can also bring scale, authority, and legitimacy. However, the need for greater accountability and political priorities can limit the effectiveness of prioritizing relational and invisible outcomes. Markets can also complement resilience building efforts but the

experimentation with newer approaches and investment in trust building where there are no immediate commercial returns requires patient, flexible, trust-based work that builds community capacity.

▶ **Philanthropy is differently positioned and well suited to support the creation of community centric resilience.** It can support innovations that may or may not work but generate learning, create connective infrastructure (e.g., learning networks, forums), and support the building of civic muscle that can act during and in-between disasters to improve communities' resilience against climate disaster shocks.

The next chapter explores philanthropy's role not as the primary funder of disaster response at scale, but as the catalytic investor in creating the enabling conditions that allow community-centred approaches to emerge and scale.

💡 Key takeaways

▶ Three interconnected failures—of attention, design, and relationships—explain why proven community-centric resilience models remain isolated pilots rather than mainstream practice.

▶ Attention failure: Success is often narrowly measured by lives saved, while slow-onset hazards, long-term recovery needs, and impacts on marginalized groups remain invisible to systems and funders.

▶ Design failure: India's disaster systems were built for rare, large-scale events and are yet to adapt to the new normal of frequent, overlapping, hyperlocal disasters. As a result, local institutions do not have the authority, resources, or capacity to respond contextually.

▶ Relational failure: Coordination between government, CSOs, and communities remains episodic and transactional, with community participation structures existing largely on paper. Philanthropic funding while present often arrives too late and is too rigid in determining what funds can be used for.

▶ Communities themselves hold the key to overcoming these failures: they have full visibility into disaster impacts, improve solution design through local knowledge, and provide relational continuity across the entire disaster lifecycle.

05

Catalyzing Change

What can philanthropy do

▶▶ India's disaster reality is changing faster than its institutions can adapt. The innovations documented earlier show that resilience building can be proactive when communities take the lead and samaaj actors receive patient support to build communities' capacity to lead resilience efforts. Philanthropy can champion these efforts, especially to pilot innovations and fund activities in between disasters.

Government support, authority, and scale remain critical to drive population level resilience but political cycles and rigid processes constrain the creation of space to experiment and learn from different resilience building approaches. With their higher risk appetite and ability to support resilience initiatives even when they are not top of mind (e.g., in between disasters), philanthropies are uniquely positioned to support innovation, strengthen the overall ecosystem when outcomes are uncertain, and take on the critical task of building and maintaining community capacities between disaster events. Beyond flexible and risk tolerant funding, two other qualities make philanthropic support critical to help build common agenda and advance community centric resilience approaches:

▶ First, they can support multi-year efforts to create enduring systemic value and lay the foundation for transformative resilience rather than temporary recovery.

▶ Second, via their influence and networks, philanthropies are well positioned to work across field or practice-based silos (e.g., climate and disaster resilience) and actors (think tanks, NGOs, CSOs, social entrepreneurs).

✕ Philanthropic capital can follow two pathways to support resilience building – funding innovation or creating the necessary ecosystem infrastructure.

Based on local and global proof points and systemic barriers that exist, two complementary pathways emerge that philanthropies can adopt:

Pathway 1: Fund community facing ideas and support their scale up

Philanthropy can support the full arc of innovation by funding early-stage pilots, validating approaches that show promise, adapting proven models to new geographies, hazards, and community contexts, and supporting scale up of promising solutions. Specific efforts that philanthropies could take on under this pathway include:

Idea #1 Driving community-led planning and response capacity

Why focus on the idea: PRIs, ward-level committees, and DDMAs are often positioned as frontline leaders but lack authority, resources, and functional capacity to make context-specific decisions. Similarly, communities' civic muscle and capacity to undertake resilience-oriented activities need to be strengthened. Pilots from PGVS and WOTR show that village disaster committees with trained teams for rescue, first aid, and evacuation or for better development planning (e.g., for water resources or livelihoods) can effectively improve community level outcomes and ownership of resilience actions.

What can philanthropies pursue:

▶ Providing technical assistance to undertake scenario-based planning processes that draw on local risk knowledge, historical memory, and community mapping of safe zones, evacuation routes, and vulnerable populations

▶ Embedding community resource persons in DDMAs to ensure two-way communication between government, local panchayats, and communities

▶ Developing replicable tools (playbooks, SOPs, training modules) that enable communities to conduct risk planning with minimal external facilitation

▶ Supporting local bodies to identify and access existing government schemes (watershed development, embankment maintenance, housing) for resilience implementation

▶ Training community response teams in rescue, first aid, evacuation support, psychosocial first aid—with regular drills that keep skills active between disasters

▶ Building community capacity to undertake anticipatory action such as creation of appropriate infrastructure (e.g., disaster resilient housing or flood prevention structures), or management and conservation of natural ecosystems (e.g., mangroves that can act as buffers against climate shocks)

Idea #2 Build financial protection or buffers for households

Why focus on the idea: Households require financial buffers to recover from repeated disaster shocks and rebuild their livelihoods. Existing compensation mechanisms are hard to access and often delayed, cover only a fraction of actual losses, and remain out of reach for many vulnerable households (e.g., migrant workers or informal workers who lack documentation). The lack of such buffers can perpetuate negative coping strategies such as distress asset sales. Initiatives anchored by organizations like SEWA and SEEDS show that financial mechanisms to direct funds to support financial capital building for households can help provide immediate relief when households need it the most.

What can philanthropy pursue:

▸ Designing and piloting of multi-hazard insurance products with appropriate triggers, data sources, and payout mechanisms for different contexts

▸ Testing incentive structures that link insurance coverage with resilience-building behaviours (e.g., coverage for households adopting climate-resilient practices)

▸ Community-managed savings and lending mechanisms (on similar lines as the Cambodia CRF model covered in Chapter 3) that build financial buffers between disasters

▸ Supporting innovation on parametric triggers for new hazard types that are especially relevant for Indian contexts (e.g., heat stress, slow-onset events)

Idea#3 Help implement early warning and risk communication systems

Why: India's early warning systems have become technically sophisticated but are not designed for community usability. The Caritas transboundary model between India and Nepal showed that creating a community-led and managed early warning solution can be highly effective in forewarning communities of impending disasters and supporting preventive action.

What to pursue:

▸ Converting technical forecasts into impact-based, locally relevant guidance that communities can act on ('water will enter homes' rather than 'rainfall expected')

▸ Building communication systems that remain functional when infrastructure fails, such as radio networks, mesh systems, and offline-capable solutions

▸ Creating community ownership of monitoring equipment, with local maintenance capacity and clear protocols for warning dissemination

▸ Adapting proven early warning solutions from other contexts to Indian communities, including for emerging hazards such as heat stress, glacial lake outburst risks, new flood patterns from changing rainfall, etc.

Idea #4 Support communities to shift the resilience narrative

Why focus on the idea: Slow-onset hazards or repeated small shocks can severely impact communities but not receive adequate attention from the media or decision makers. Enabling communities to document climate hazards and risks, and advocate for better resources, can help turn media and institutional attention to challenges that communities see as disruptive and direct resources to their needs.

What to pursue:

▸ Supporting CSOs and communities to collect local data on invisible climate hazards like tidal flooding, riverbank erosion, and heat stress, as well as their impact on communities

▸ Creating platforms that provide communities and CSOs with a voice to share their data, evidence, and narratives

▸ Guiding local advocacy efforts that translate local evidence into formal recognition, policy change, and budget allocation

Pathway 2: Build technological and ecosystem infrastructure

Building resilience at scale requires data and technology solutions as well as investments in creating the connective tissue between organizations (particularly CSOs) that can allow actors to coordinate, jointly plan agendas, share learnings with each other, and advance the disaster resilience ecosystem. This technological and connective infrastructure is chronically underfunded but remains the key to implementing resilience building at scale. Specific ideas that philanthropies could pursue include:

Idea #5 Build shared data infrastructure

Why focus on the idea: Relevant climate hazard data sits fragmented across government departments. For example, meteorological data rests with IMD, hydrological data with CWC, and vulnerability data with census agencies. This data is rarely shared with other government agencies at the frontline of climate disaster action (e.g., municipal authorities) or other civil society practitioners who could use it to create risk maps or warning systems for communities. Such data also rarely accounts for local-level risk mapping. Examples like PRISM demonstrate that integrated, open-source risk platforms can help aggregate hazard data with vulnerability information into actionable intelligence. Similarly, PetaBencana has piloted using citizen-generated data to complement official systems.

What to pursue:

▸ Creating shared data systems that aggregate government and civil society datasets into interoperable platforms accessible to practitioners

▸ Supporting community-grounded data collection, including directories of vulnerable populations, local asset mapping, and historical risk documentation

▸ Building open-source platforms that translate complex data into actionable insights for non-technical users, such as district officials, CSO workers, and community leaders

Idea #6 Implement technological solutions for real-time risk mapping and supporting community resource exchange

Why focus on the idea: Climate disasters can vary in scale and intensity. When disasters strike, communities are the first responders, relying on existing networks and piecemeal information to channel support. Creating technological platforms that build on these networks and digitize them can address multiple challenges, including verification of damage or needs of a community, mapping of available resources, and providing channels to direct resources between communities or community members. Similarly, CSOs who are the first to reach communities can effectively channel relief to communities, provided they have ready access to donors and control over how the funds should be utilized.

What to pursue:

▸ Creating digital solutions, including digital public goods or infrastructure that can allow communities to self-report damage, map their needs, and receive resources from other communities

▸ Building aid platforms that connect CSOs with pre-sanctioned funds to rapidly and flexibly deploy for relief operations to communities.

Idea #7 Provide long-term support to CSOs and CSO networks

Why focus on the idea: CSOs often work without assurance of funds to support long-term programming within communities. At the same time, the field itself remains fragmented with little interaction and knowledge sharing between CSOs to learn from each other, build common agendas, and advance resilience action. Investing in providing long-term support to CSOs building community capacity, and creating platforms that allow CSOs to engage with each other can help build critical gaps in building the field.

What to pursue:

▶ Providing multi-year, core support for CSOs with demonstrated community relationships to build their organizational capacity and undertake deep work with communities to build their civic muscle, resilience infrastructure, etc.

▶ Creating learning networks and forums that bring together grassroots CSOs and practitioners, climate experts, and other technical experts (e.g., urban planners) to share ideas and learnings, and for them to support each other's programs

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How to fund is equally important

For philanthropies considering supporting climate or disaster resilience action, it is equally important to focus on how to direct funding. As noted in previous chapters, success of various pilots offers several lessons that can make philanthropic giving effective in creating the right enabling conditions for solutions or pilots to succeed. These include:

▶ Providing flexible funding that pre-positions surge funds (e.g. pooled risk funds) or provide adaptive grants that can be leveraged by CSOs in the manner they deem fit, and not by philanthropic priorities

▶ Undertaking projects for the long term that allow CSOs with adequate runway to engage deeply with communities, including between disasters

▶ Supporting invisible social infrastructure or solutions (e.g., community capacity to organize or advocate with local government) is as important as (or perhaps more important) creating visible physical or digital infrastructure

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Given the wide-ranging impact of climate disasters on issues like education, health and wellbeing, gender, and other sectors, philanthropies that primarily support these sectors should take cognizance of climate disasters and adapt sector-specific programming to also focus on resilience.

Climate disasters are not limited to sectoral boundaries and can erase hard-won gains. As noted earlier, the impact of climate disasters is multi-dimensional. Programs or efforts directed at delivering sectoral outcomes must acknowledge risks borne out of climate disasters and adapt to continue to achieve their outcomes. Three approaches can safeguard development gains:

Idea #8 Support service restoration when disasters strike

Philanthropies can support restoration of public services (e.g., health, education, sanitation) by funding their program grantees to do so in the aftermath of climate disasters. Pre-committing funding and helping grantees create service restoration protocols can go a long way in delivering impact and improving the community's wellbeing. For example, one of the practitioners highlighted that

creating childcare spaces and restoring learning activities in flood relief camps minimized learning losses and allowed parents to focus on restoring livelihoods. In addition, play-based activity in these spaces helped children better cope with the trauma they had experienced.

Idea #9 Embed resilience in sectoral strategy

Philanthropies can adapt their portfolio strategies to include resilience as an explicit co-benefit to aim for. This includes integrating resilience-focused activities (e.g., training frontline health workers in disaster-specific response, integrating climate disasters into livelihood training). As opposed to a complete overhaul of programs, this can take the form of deliberate mapping of resilience-building strategies and fostering collaboration between grantees and climate resilience experts to enable program adaptation.

Idea #10 Strengthen frontline institutions

Philanthropies can provide technical assistance to support institutions (e.g., school administrators and networks, Aanganwadi workers) that they regularly work with to become resilience anchors. This can include helping these institutions to map the risk of climate disasters to their activities, preparing adaptation and mitigation strategies, building the capacity of their senior and frontline staff to recognize the risks, and equipping these institutions with tools to increasingly embed disaster resilience as a key element of their planning.

Key takeaways

▶ Philanthropy is uniquely positioned to catalyse community-centric resilience through patient, flexible, and risk-tolerant capital that stays engaged between disasters—a role that government and markets cannot easily fill.

▶ Pathway 1 (direct resilience building) offers seven actionable ideas: community-led planning, household financial buffers, actionable early warnings, narrative shifts, shared data infrastructure, community resource exchange platforms, and long-term CSO support.

▶ Pathway 2 (ecosystem infrastructure) calls for investment in shared data systems, digital tools for real-time risk mapping and mutual aid, and practitioner learning networks—chronically underfunded foundations for scaling resilience.

Ultimately, building India's disaster resilience requires more than new programmes or technologies. It demands a fundamental shift in how we understand and support the people who live through recurring shocks. Philanthropies must focus on strengthening people's ability to adapt, recover, and rebuild lives of dignity and agency—even as climate-linked disasters become more frequent and severe. With patient capital, flexible partnerships, and long-term commitment, philanthropy can help create an ecosystem where communities are not only protected from disasters but are empowered to shape their own resilient futures. This is the opportunity, and responsibility, for the sector as India navigates its new climate reality.

▶ Philanthropies working on education, health, livelihoods, or gender must recognize that climate disasters directly threaten their impact, and should embed resilience as a lens across all sectoral strategies.

▶ The shift philanthropy must make is from episodic generosity after headline disasters toward sustained investment in community institutions, social protection, and the civic muscle that enables communities to shape their own resilient futures.

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Annexure 1

List of common abbreviations

No.	Abbreviation	Description
1	ADRA	Adventist Development and Relief Agency
2	ASAR	Association for socially applicable research
3	CAT Bond	Catastrophe bond
4	CSO	Civil Society Organization
5	CODRR	Committee on Disaster Risk Reduction
6	CSR	Corporate Social Responsibility
7	DRR	Disaster Risk Reduction
8	DDMA	District Disaster Management Authority
9	GLOF	glacial lake outbursts floods
10	GP	Gram Panchayat
11	GPDP	Gram Panchayat Development Plan
12	IPCC	Intergovernmental Panel on Climate Change
13	LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, Asexual and other sexual identities
14	MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act

No.	Abbreviation	Description
15	MISHTI	Mangrove Initiative for Shoreline Habitats & Tangible Incomes
16	MHA	Ministry of Home Affairs
17	NCRMP	National Cyclone Risk Mitigation Project
18	NDMA	National Disaster Management Authority
19	NDMP	National Disaster Management Plan
20	NIUA	National Institute of Urban Affairs
21	PRI	Panchayati Raj Institutions
22	PWDs	People with disability
23	PRISM	Platform for Real-time Impact and Situation Monitoring
24	PGVS	Poorvanchal Grameen Vikas Sansthan
25	PDNA	Post-Disaster Needs Assessment
26	PTSD	post-traumatic stress disorder
27	PMFBY	Pradhan Mantri Fasal Bima Yojana
28	SEWA	Self-Employed Women's Association
29	SHGs	self-help groups
30	SEEDS	Socio Economic and Educational Development Society

Rohini Nilekani Philanthropies Foundation (RNPF) is a grant-making organisation seeking to create and strengthen communities for their own betterment. RNPF does this by supporting ground-breaking work anchored in networks and movements and often sits at the intersection of Samaaj, Sarkaar, and Bazaar. RNPF focuses on emerging themes essential to an equitable and inclusive society, such as civic engagement, access to justice, gender equity, mental health, and climate & biodiversity. RNPF is founded by Rohini Nilekani, a committed philanthropist, and currently, the Chairperson of the Foundation. Rohini and her husband, Nandan Nilekani, are signatories to the Giving Pledge, pledging to give away half of their wealth to philanthropy.

Dalberg is a global group of social impact-driven enterprises whose common mission is to build a more inclusive and sustainable world where all people, everywhere, can reach their fullest potential. Dalberg was founded in 2001 as a strategy and policy advisory firm, bringing a blend of practical management experience and world class business analytics to the social impact sector. Mandated by the Dalberg Trust, its businesses put impact first, and its people constantly innovate to find new solutions to the world's most challenging problems.

Resilience

Moving beyond surviving
climate disasters to supporting
communities to thrive

ROHINI NILEKANI *philanthropies*

Dalberg