

### INTEGRATING DISASTER RISK MANAGEMENT DURING RECOVERY

Annual Report: 2023 - 2024





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# **KEYNOTE** By Founders

Dear Friends and Colleagues,

Looking back on the past year at SEEDS, we are deeply grateful for your steadfast support and commitment. Your dedication has been crucial in driving meaningful change and building resilience in communities across India. While reflecting on the impact we have made we remain focused on continuing our vital work. Together, we have reached significant milestones, yet our mission is far from complete.

Through 2023 and 2024 our emergency response continued. The devastating floods in Noida, Himachal Pradesh, and the impact of Cyclone Michaung once again spotlighted the urgent need for disaster response and recovery with the increasing number of extreme incident unfolding. With support from various partners, we provided humanitarian aid, immediate relief and transitional shelters to affected communities. Our response to the tragic train accident in Odisha and the severe flooding in Chennai further demonstrated our commitment to supporting those in need.

Our work in the Cachar district of Assam focused on building long-term resilience by integrating Disaster Risk Management (DRM) practices into daily life and providing essential support to flood-affected communities. Our work on the National Loss Platform (NLP) and the #UnderTheUmbrella campaign exemplify our innovative approaches to climate awareness and resilience.

By building environmental resilience in urban areas, we have addressed sustainable water management by restoring water bodies in Gurugram in the National Capital Region. This is a key step in reviving natural habitats and enhancing water resource management. We comprehensively tackled water quality issues in a peri-urban lake in Bengaluru, including strengthening rainwater channels, restoring lake connectivity, and implementing natural water purification methods. By integrating green infrastructure to revitalise urban natural habitats, our work improved ecological balance, created safe and accessible public spaces, and fostered biodiversity and environmental awareness.

We also continued our transformative mangrove restoration project in the Sundarbans, focused on building resilience through nature-based solutions and community-led actions, harmonising community needs with nature to improve lives and promote environmental sustainability.

Moreover, the Bihar Sustainable Livelihood Development (BSLD) project continues to address hunger, poverty, and environmental challenges in the Darbhanga district, and other partnerships have strengthened local leadership and resilience in climate- vulnerable districts. Lastly, our efforts to combat heatwaves in East Delhi's Kishankunj community underscore our commitment to addressing climate-induced risks and improving community resilience through awareness campaigns and infrastructure improvements.

Addressing waste has become crucial in building ecological resilience, and our project in Assam addressed waste disposal challenges by establishing a waste recovery facility and setting a benchmark for sustainable waste management through technological advancements and community training. In Dehradun and Ankleshwar, we have worked to address gaps in educational amenities, ensuring that students have equal access to essential resources and a supportive learning environment. In Meghalaya, our initiatives have bolstered healthcare services in remote areas by supplying crucial medical equipment to Primary Health Centres.

Supported by our partners, over the last year, we have also advanced the Green Building certification project, promoting sustainable construction practices in Andhra Pradesh. Our Digital Library Bus project has enhanced educational resources for underprivileged students in East Delhi.

Once again, our heartfelt gratitude to each of you for your unwavering support and commitment to our cause. As we look to the future, let us continue to stand together, shoulder to shoulder, in solidarity with those most in need, and build a world where no one is left behind in the face of disasters.

#### Manu Gupta and Anshu Sharma Founders, SEEDS

# MISSION, VISION, CERTIFICATES, & ALLIANCES

### VISION

Transforming the vulnerable into resilient and thriving communities.

#### **MISSION**

Equipping the most vulnerable with appropriate tools and technologies, sharing knowledge and skills and promoting linkages among stakeholders to prevent loss of life and suffering.

#### **STRATEGY 2030**

We are committed to enabling the most marginalised of the 316 million people residing in 225 climate vulnerable districts of India to survive, adapt and thrive despite recurring disasters. We plan to achieve this by building a national data platform to record climate related losses, implementing climate resilient solutions in most vulnerable regions and building an ecosystem of service and product providers, who can reach those suffering the most from climate impacts.

#### **CERTIFICATIONS AND ALLIANCES**

SEEDS is certified by and is a signatory to:

- The Code of Conduct for The International Red Cross and Red Crescent Movement
- Charities Aid Foundation (CAF)
- GuideStar India
- Credibility Alliance
- Give India

We are members of and allied to:

- Alliance for Adaptation and Disaster Risk Reduction (AADRR)
- Asian Disaster Reduction and Response Network (ADRRN)
- Active Learning Network for Accountability and Performance (ALNAP)
- Climate Action Network (CAN) South Asia
- The Network for Empowered Aid Response (NEAR)
- The Global Network of Civil Society Organisations for Disaster Reduction (GNDR)
- Start Network and a member of India Hub of the Start Network
- Sphere India
- Owner Driven Rehabilitation Collaborative (ODRC)
- Voluntary Action Network India (VANI)
- Catalyst 2030

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# **SEEDS STRATEGY** 2030

Our vision of transforming the vulnerable into resilient and thriving communities provides a central theme for the SEEDS STRATEGY 2030. It describes what is referred to as the triple bottom line approach of capturing an expanded spectrum of values which includes planning for the future and measuring results. It signals that we are using a decision-making approach that produces social, cultural, economic, and environmental benefits. The phrase conveys that people, economic welfare, and our relationship to the planet are tied together in a mutually supportive and interdependent way. Social and environmental goals cannot be achieved without sustainable livelihoods — and achieving economic stability is highly related to social well-being and environmental quality.

In India, research conducted internally at SEEDS found that there are over 200 climate hotspots that will put the lives of more than 300 million people at risk by 2030. These areas will experience never-before scale and frequency of climate induced disasters. We are faced with the challenge of responding urgently and at scale to keep up with the growing needs of assistance to overcome the losses and yet be able to thrive. Floods, cyclones, landslides, earthquakes and droughts are the five most common disasters in India with 52% of the disasters being floods.

With the support of selfless volunteers, collaborative partners and generous donors, millions of lives have changed, hundreds of houses have been built, dozens of community events and workshops organised. All this hard work comes together to create Strategy 2030 that seeks to enable the most marginalised of the 316 million people residing in 225 climate vulnerable districts of India to survive, adapt and thrive despite recurring disasters.

We aim to achieve this together with an ecosystem of community-based organisations, local Civil Society Organisations (CSOs), Government agencies, disaster monitoring agencies, funding agencies, and market-based solution co-creators by leveraging models that allow direct assistance to affected people in a dignified manner.

Strategy 2030 not only captures our values, highlight our goals and ambitions, but also wrestles with our challenges. How do we protect the vulnerable in the context of rising climate risks? How do we mitigate the compound impact of extreme weather events and the pandemic? How can we incorporate capacity building into everything we do, and ensure that everyone has access to meaningful opportunity?

Key components of the Strategy 2030 include:

- **Digital Platform:** To achieve scale, SEEDS will build an inclusive digital platform to enable exchange of knowledge, practices and promote learning.
- **Network of Networks:** SEEDS will build a network of individuals, organisations, volunteers, staff to ensure implementation capacity in all 100 districts.
- **Funding System:** A robust funding system will be set in place to power 10-year programme; funding partnerships will be established with partners organisations both local and international, who share the same vision. New forms of funding would be explored to enable access to the bottom 1%.

At the core of these approaches is the central role of affected communities in becoming aware of, assessing, and managing local climate risks.





# DISASTER Response Fund

#### **Responding to Disasters Without Delay**

In 2001, when the Gujarat Earthquake occurred, our phones rang nonstop, and news flowed in from every direction. The local community relied on us to connect donors, coordinate relief and respond to the crisis on ground. SEEDS recognises the need for an immediate, action-driven, and transparent method of mitigating climate-induced disasters and humanitarian crises and thus seeks to create the Disaster Respond Fund (DRF), a funding mechanism for rapid response to emergencies.

DRF represents a fund for financing urgent emergency response. The fund is an integral component of the organisation's comprehensive capacity to respond to natural disasters. The benefit of creating such a system is that it enables the organisation to respond promptly to requirements on the field. Additionally, it helps the organisation to meet the immediate and long-term requirements of the community swiftly and effectively. To ensure accountability, this funding mechanism will have independent oversight and governance, in accordance with the SEEDS governance and policies, and will be directly visible to prospective funders.

How is DRF structured?

- The funds will be used to enhance the overall quality and efficacy of SEEDS' response to disasters and other emergencies
- The funds will be used to supplement ongoing response activities
- DRF funding will be used to support minor and medium-sized disasters
- Each response supported can vary in terms of scale, scope, the needs of the affected communities, and SEEDS' capacity to respond

## **SEEDS IMPACT** 2023 - 2024

Direct Outreach 7,22,614

Indirect Outreach

26,39,436

Number of Emergencies Responded to

5

Reach of Humanitarian Response



Number of People Trained

3,44,745

Number of Schoolchildren Reached



## OUR PARTNERS

#### Adobe

Amazon Development Centre (India) Pvt. Ltd. Avantor Performance Materials India Pvt. Ltd. Center for Disaster Philanthropy Chegg India Pvt. Ltd. Council of Philanthropies for Climate Action Give to Asia Heifer Project International IIFL Home Finance Ltd. IndusInd Bank Ltd. Ingersoll Rand India Ltd. InterGlobe Foundation Marelli Powertrain India Pvt. Ltd. Max Life Insurance Co. Ltd. Microsoft Corporation India Pvt. Ltd. NIKE India Pvt. Ltd. NVIDIA Graphics Pvt. Ltd. Paul Hamlyn Foundation PWC Singapore Foundations Rohini Nilekani Philanthropies Foundation Sada Systems India Pvt. Ltd. Save the Children Start Network Vestas Wind Tech IPL

And the people who have been supporting SEEDS work through the year

# **2023 - 2024** A YEAR OF DISASTERS



APR

2023



#### **Cyclone Mandous**

The cyclone affected the south-eastern coast of India, including Tamil Nadu and Andhra Pradesh bringing heavy rains, strong winds, and flooding, leading to damage and displacement.

#### **Heatwaves in Northern and Central India**

Intense heatwaves impacted states like Uttar Pradesh, Delhi, Madhya Pradesh, and Rajasthan, leading to health crises, with a rise in heat-related illnesses and deaths.



JUL

2023

AUG 2023

OCT

2023



#### **Cyclone Biparjoy**

The powerful cyclone struck the Indian states of Gujarat and Maharashtra, causing widespread damage due to heavy rains, strong winds, and flooding, resulting in significant infrastructure damage and displacement of communities.

#### Floods in Assam

Assam experienced severe flooding due to continuous heavy rainfall and the overflowing of major rivers, affecting thousands of families, leading to loss of homes and crops.

#### **Floods in Kerala**

Kerala faced severe flooding due to heavy monsoon rains causing extensive damage to homes, roads, and agriculture, and necessitating large-scale relief operations.

#### Earthquake in Himachal Pradesh

A significant earthquake with a magnitude of 6.3 struck Himachal Pradesh, causing widespread damage to buildings, infrastructure, and resulting in casualties.

#### JAN 2024



#### **Drought in Maharashtra**

Maharashtra experienced a severe drought in early 2024, impacting water supply, agriculture, and livelihoods, prompting emergency relief measures.





#### **Cyclone Remal**

The cyclone affected West Bengal and Odisha, bringing heavy rains and strong winds, leading to flooding, property damage, and displacement.





#### Floods in Uttarakhand

Heavy rainfall led to floods and landslides in Uttarakhand, causing damage to infrastructure, homes, and affecting transportation networks.





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Odisha Rail Accident: Assisting Affected Families with Immediate Relief and Psychosocial Aid

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## THREE DECADES OF Resilience and impact Reflecting on SEEDS Journey

Since 1994, SEEDS (Sustainable Environment and Ecological Development Society) has made a lasting impact, focusing on building resilience across vulnerable communities in India. In its early years, SEEDS worked in Himachal Pradesh, Rajasthan, and rural Goa, understanding how environments affected communities. This grassroots engagement laid the foundation for research-led efforts to address the needs of marginalised populations in remote areas.

In 1998, SEEDS shifted focus to disaster management following the Kandla Cyclone, which exposed the failures of early warning systems and preparedness. The Super Cyclone of 1999 in Odisha, which claimed around 10,000 lives, further highlighted the need for effective risk reduction in urban areas. SEEDS began exploring how to reduce urban risks through research and community-based disaster risk reduction strategies, including the role of safe housing.

The 2001 Gujarat earthquake marked another pivotal moment. What started as relief work transitioned into large-scale reconstruction efforts, with SEEDS focusing on creating model villages designed to withstand future seismic events. These efforts reinforced the organisation's mission to empower communities and strengthen local resilience.

Over the years, SEEDS realised that funding for risk reduction was limited, driving the need for innovative and scalable solutions. By 2018, the increasing frequency of disasters due to climate change prompted SEEDS to broaden its focus to include climate resilience efforts, such as coastal restoration and lake rejuvenation.

SEEDS has spent three decades working at the grassroots level, driving risk reduction through local solutions and empowering communities to become more resilient in the face of disasters and climate change.

Photograph Credit: Siddarth Behl

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Photograph Credit: Talking Fish Pvt. Ltd.

## ENVIRONMENTAL RESILIENCE IN URBAN AREAS



## **Reviving Nature** as a Solution

The Sundarbans region faces severe coastal risks, including land loss, infrastructure damage, and salinisation of freshwater supplies, severely affecting agriculture and mangrove growth. Climate change impacts have gendered dimensions, as the out-migration of men has left women unprepared for new roles in disaster preparedness and farm management. Underprivileged fishing communities suffer from frequent natural hazards, poor disaster preparedness, and inadequate early warning systems, exacerbated by high poverty. Restoring the mangrove ecosystem and building community resilience is crucial for the region's future.

Launched in 2020, and supported by NVIDIA, SEEDS implemented a project in the Sundarbans to restore mangroves and strengthen stakeholder capacity for conservation and sustainable management, reaching 2,46,445 individuals (as of 2024). The project seeks a long-term solution where the community is in sync with nature, building resilience to future risks. Emphasising nature-based solutions, the initiative has been community-led, focusing on training and equipping the community to ensure they are prepared. It has significantly improved local communities' lives and livelihoods while promoting environmental sustainability. By implementing community-led actions and nature-based solutions, the project has empowered residents to adapt to and mitigate the impacts of climate change.

Starting with the Amphan cyclone response project in 2020-2021, SEEDS initially focused on Gopalnagar Gram Panchayat (GP) in the Patharpratima Block. The project expanded in 2022 to cover six additional GPs, and further extended in 2023 to include four more GPs in Patharpratima. Additionally, in 2023, SEEDS began interventions in the Kultali and Gosaba Blocks, significantly increasing the total intervention area and reaching a larger population.





The project conducted Focused Group Discussions (FGDs) and scientific analysis, to identify suitable locations for mangrove plantations. This effort focused on soil stabilisation and reducing the impact of cyclones and storm surges. Community groups, crucial to regional mangrove conservation, were engaged to plant 50,000 mangrove saplings across 17.3 acres, enhancing coastal resilience and biodiversity. The project also secured 0.46 acres for natural soil erosion barriers through collaboration with the Panchayati Raj Institution (PRI), leading to a noticeable decrease in breaches and erosion at monitored sites.

In addition to mangrove planting, the project implemented nature-based solutions for riverside and stream bank protection, training 60 community members in embankment protection to safeguard against erosion. The initiative extended to rejuvenating 25 water bodies, improving water quality and ecosystem health through youth engagement and community cleaning interventions. Furthermore, the project focused on capacity building, training 100 new volunteers and refreshing 170 previously trained ones in key disaster management areas, including search and rescue, first aid, early warning, and relief shelter management.

The project has increased awareness among 450 villagers on protecting freshwater ecosystems and empowered them with biodiversity management strategies. It has managed to strengthen community resilience against natural disasters through mangrove planting, embankment protection, and water body revitalisation while also preserving biodiversity and creating alternative livelihoods.





### **Restoring** Wazirabad Lake

India's traditional water bodies, such as ponds and lakes, are essential for maintaining ecological balance, supporting biodiversity, supplying drinking water, recharging groundwater, and controlling floods. However, cities like Gurugram are facing severe water scarcity, with water tables dropping significantly due to overuse, unplanned urbanisation, and inadequate infrastructure. In some districts, 13% of wells and 9% of the land have seen water levels decrease by over four meters. The Gurugram Metropolitan Development Authority (GMDA) has reported that 53 water bodies are at risk of destruction, and 153 are beyond recovery, prompting urgent restoration efforts.

In response, SEEDS, with support from Max Life Insurance in the first phase and Ingersoll Rand India Limited in the second phase, initiated a project to restore Wazirabad lake in Gurugram, focusing on improving its health, ecological balance, and sustainability. The project integrated water networks with green infrastructure to revitalise urban natural habitats, aiming to deliver environmental, socio-cultural, and economic benefits, and attract more visitors from nearby and distant areas. Key goals included developing public spaces and pathways that are attractive, safe, and accessible for all, including the elderly and disabled. Efforts also centred on enhancing biodiversity, raising environmental awareness, and encouraging active support for nature conservation.

The project involved preparing the lake area by levelling, filling, and dressing the ground to create a smooth, visually appealing environment. An 850m track for cycling and jogging was established to promote exercise and a healthy lifestyle. Two viewing decks were constructed for elevated views, and 40 lighting units were installed to enhance safety and extend usability into the evening. Additionally, 16 benches were strategically placed for visitors to rest. This development boosted outdoor recreation and supported community health by providing spaces for exercise and relaxation, fostering social cohesion, and attracting tourists, thereby benefiting local businesses and potentially increasing property values.

In urban areas, the creation of water bodies helps reduce the urban heat island effect by providing natural cooling and lowering air temperatures during heat waves. They also play a crucial role in flood prevention by absorbing stormwater and regulating its release, reducing the risk of urban flooding. Water bodies contribute to groundwater replenishment by acting as natural reservoirs, gradually recharging groundwater supplies. They enhance urban landscapes by increasing green cover, improving air quality, and offering recreational spaces that promote community well-being. Additionally, they improve water quality by filtering pollutants, creating a healthier environment for both people and wildlife.

To further advance this project, a comprehensive waste management plan could be developed, including procedures for handling, sorting, and disposing of waste, with designated areas for storage and protocols for monitoring waste generation. Exploring opportunities to repurpose or reuse materials from demolished structures or excavated soil and providing training and resources to construction crews on waste management best practices, would help minimise the environmental impact.



## **Bringing Nature Back:** Reviving a Gurugram Lake

India's traditional water bodies, such as lakes, tanks, and *baolis*, are vital for ecological balance, providing drinking water, flood control, groundwater recharge, and supporting biodiversity. However, from 2007 to 2017, rapid urban expansion and encroachments in Gurugram have drastically reduced these water bodies and vegetation areas, threatening their existence. With the water table in Gurugram dropping significantly, the city faces severe water scarcity. Rapid real estate development in the city has outpaced city planning and public infrastructure, negatively impacting water supply, wastewater treatment, water bodies, green spaces, and air quality. This growth, coupled with a rapidly increasing population, has created an imbalance between groundwater extraction and recharge, further degrading the city's overall quality of life.

The Gurugram Metropolitan Development Authority (GMDA) has initiated efforts to revive the natural habitat of endangered water bodies, but many are beyond revival, highlighting the urgent need for sustainable management and conservation. The rejuvenation of the Jharsa water body involved several critical tasks, including extensive cleaning, dredging, and desilting to remove debris like algae and aquatic weeds. Green waste was disposed of on GMDA land, and the surrounding area was cleared.



Dredging reshaped the water body to a depth of 10-12 feet with 2850 cubic meters of soil excavated, and embankments were developed according to GMDA guidelines. Jogging tracks were added to enhance community engagement and recreational use; while fencing and a gateway were installed to protect the area from waste dumping and grazing animals. Concrete seating and signage were introduced to improve accessibility, and native vegetation was added to improve biodiversity. Moreover, community engagement was central, with meetings and workshops fostering local involvement and forming a dedicated committee for ongoing support and capacity-building

The project aims to integrate water networks and green infrastructure, fostering natural habitats and enhancing biodiversity. Objectives include creating attractive public spaces, increasing community awareness about environmental protection, and encouraging active participation in conservation efforts. The initiative seeks to provide environmental, socio-cultural, and economic benefits, increasing foot traffic to the rejuvenated water body and its surroundings, and promoting sustainable community involvement in nature conservation.

The rejuvenation of the Jharsa water body also enhanced flood protection by increasing its depth to better manage stormwater runoff and reduce flood risk. It further supports groundwater replenishment by allowing water to percolate and recharge the aquifer, improving local water accessibility. Additionally, the project has created green spaces that improve the urban climate and regional environment, enhancing water and air quality.

### **Restoring Balance:** Ecological Restoration of a Peri-Urban Lake & Wetland

Bengaluru's lakes are critically endangered, with over 65% of their interconnectivity lost due to encroachments and unplanned development. This degradation has led to increased sewage inflow, frequent flooding, and the destruction of traditional water-harvesting practices. The number of wetlands in Bengaluru has dropped from 300 in the 1970s to 185, with significant damage across all major valleys. Wetlands, crucial for contaminant remediation and biodiversity, are severely threatened by urbanisation, pollution, and hydrological changes, disrupting their ecological functions and services.

To address water quality issues from various sources and catchment degradation, a comprehensive water resource management approach was essential. Watershed-based planning is crucial for effectively protecting and restoring aquatic ecosystems and human health. SEEDS supported by NIKE focused on the peri-urban lakes of Huvinayakanahalli and M.K. Halli, which are vital for supporting local agriculture and providing drinking water to the locals. The project included activities like strengthening rainwater channels, restoring lake connectivity, introducing floating islands for natural water purification, and setting up strategic waste disposal systems.

The project included awareness workshops for agriculturists and farmers to boost their involvement. Ecoawareness sessions were held for children, youth, and students in five villages to foster environmental sensitivity and engagement. Additionally, training programs on organic farming, water management, and

Photograph Credit: Talking Fish Pvt. Ltd.

forestry were provided to support the implementation of sustainable farming practices. However, to strengthen the catchment area by rebuilding the wetland ecosystem, the project involved cleaning and de-weeding the catchment area around the lake to expand the habitat for wetland species. The team planted 2,000 indigenous plants and created diverse wetlands with various trees, shrubs, and plants, encompassing land preparation and soil enrichment. Maintenance also included watering, manure application, and overall upkeep for the project's duration.

The project also involved conducting biodiversity studies to assess improvements in lake and wetland ecosystems through regular benchmark surveys on biodiversity, water holding capacity, agro-yield, and groundwater to document the status and analyse the project's impact. It also focused on enhancing lake infrastructure by improving rainwater inlet channels to boost inflow into the lake, through de-weeding, land clearing, and debris removal from the catchment area to facilitate rainwater entry. Additionally, the project involves deepening, widening, and de-silting rainwater channels to maximise rainwater intake.

However, the project was not without hurdles. In August 2023, a dry spell delayed the deployment of floating islands in local lakes, but significant rainfall in September enabled their introduction. Flooding from a recent downpour disrupted rainwater management infrastructure, delaying activities involving rainwater inlet channels. After the floods, efforts focused on restoring these channels to protect agriculture and infrastructure. Challenges also included delays in local government contributions and infrastructure repairs due to bad weather and bureaucracy. To address this, establishing stronger relationships and maintaining regular engagement with local authorities was initiated.

The establishment of a Lake Management Committee ensured the project met community needs and fostered local support, enhancing sustainability through collective stewardship. Engaging youth and children in educational sessions promoted environmental awareness.

Photograph Credit: Talking Fish Pvt. Ltd.

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## **Reviving History:** Rejuvenating the leonic Hauz-i-Shamsi Water Tank

Hauz-e Shamsi is a historic water reservoir in Delhi, built in 1230 CE by Shamsud-Din Iltutmish. Once an important pilgrimage site providing fresh water and supporting local flora and fauna, it suffers from habitat loss, encroachment, and pollution. Invasive species further degraded the site by disrupting natural processes. The project aimed to restore Shamsi Talab through comprehensive renovation, including wetland development, native vegetation, and groundwater conservation, to revive its ecological integrity and transform it into a recreational space for local communities.

The project undertaken by SEEDS and supported by IndusInd Bank, aimed to conserve and revitalise the lake by integrating natural and cultural components through an interdisciplinary approach and active involvement of various stakeholders. A participatory approach was taken to build local capacity for project implementation and ongoing management – creating a model for similar heritage sites in the city.

The Hauz-i-Shamsi rejuvenation project focused on restoring ecological balance and community involvement. A site survey assessed the historical and geographical context for planning. Clearing and de-weeding removed debris and invasive plants. Floating bio-islands were installed to enhance water quality through bioremediation. Community engagement included forming maintenance groups and conducting educational activities for students, supported by the "Pride of Shamsi" committee. Protective measures like fencing, solar-powered aerators, and signage were implemented, contributing to the project's success in promoting environmental sustainability and community ownership.

Many challenges arose as residents continued to dispose of household garbage improperly, leading to environmental and health issues. Sewer leakage complicated efforts to close inlet points, with temporary repairs often failing under pressure. Frequent turnover and changes in government departments caused delays and inconsistencies in project execution. Additionally, time constraints hindered effective community engagement in project activities, affecting participation.

The project included two key interventions: a constructed wetland system (CWS) and floating bio islands. The CWS used natural wetland functions to treat contaminants in water, significantly reducing pollutants. Floating bio islands addressed waterborne pollutants by mimicking natural floating islands to reduce suspended solids and organic carbon. Both interventions followed the Delhi Jal Board's SOPs for site management and public engagement. Short-term actions involved site cleaning and community awareness, while long-term plans included forming a management board and implementing the Repair, Renovation, and Restoration (R) phases. This comprehensive approach aims to restore Hauz-i-Shamsi's ecosystem while preserving its historical significance.

Alam, a Mehrauli resident, described the previous condition of Shamsi Talab as appalling due to widespread waste dumping and drainage water contamination, leading to a foul odour. He has witnessed the area's decline since childhood and sees its current transformation as a dream come true for the area and its people.

## **Solid Waste Management** Intervention in Golaghat

The Bokakhat Assam Solid Waste Management (SWM) Project was launched to address waste disposal and management challenges in the Bokakhat subdivision of the Golaghat district. The area faced challenges with waste disposal, environmental degradation, and inadequate waste management infrastructure. With support from InterGlobe Foundation, the project aimed to create a sustainable waste management system by establishing a waste recovery facility, incorporating technological advancements, and implementing the 3 R approach (Reduce, Reuse, Recycle). It also aimed at providing training and educational initiatives to improve stakeholder awareness and practices, to set a benchmark for effective and sustainable waste management in the region through collaboration, innovation, and commitment.

Initial efforts included site explorations, dialogues with local authorities, and securing support from district administration. The project invited all stakeholders to contribute to a cleaner and more sustainable community, serving as a model for other regions. Constructive meetings with local authorities were crucial for securing approvals, institutional support, and fostering collaborations to enhance the project's implementation and effectiveness. The project began with mapping waste generation at household and commercial levels to identify high-waste areas and prioritise interventions. It also focused on clearing legacy waste through efficient operations and coordination with authorities to mitigate environmental and public health risks. A door-to-door waste collection campaign was implemented in two wards, including resident education on waste segregation and collection schedules. Additionally, training and capacity-building sessions were conducted for sanitary workers, including the distribution of safety kits, to enhance their waste-handling skills and safety practices.

A workshop on Solid Waste Management brought together community stakeholders and Self-Help Groups (SHGs) to strategise on waste reduction and recycling, establishing SHGs as key players in promoting environmental awareness and sustainability. A door-to-door community awareness drive educated residents on waste segregation, resulting in a 30% increase in household participation. Additionally, school awareness drives engage students in waste segregation, recycling, and composting, fostering environmental responsibility and encouraging sustainable practices in their communities.

The project strengthened partnerships with local authorities and stakeholders to enhance collaboration and support for sustainable waste management. Ongoing efforts include installing aerobic bins at the Latabari dump site to convert organic waste into compost, alongside training local personnel and conducting workshops for Self-Help Group (SHG) leaders on composting techniques. The Community Composting Initiative educates residents on composting to reduce landfill waste and improve soil health, while the *Swachta Hi Seva* campaign mobilised community members for a mass cleanliness drive, demonstrating the impact of collective action on waste management.

Seamless coordination among government departments and stakeholders is complex, and safeguarding the health and safety of sanitation workers requires continuous effort and support. Despite these and many other challenges like changing local attitudes towards responsible waste management, encouraging community participation, and ensuring alignment among sanitation workers and local authorities, the project tried to create a sustainable waste management system.

Moving forward, the project includes the ongoing construction of a waste recovery facility with a focus on efficiency and sustainability. A Door-to-Door Collection Campaign aims to streamline waste processes, while compost pit installations and training are designed to reduce waste volumes and promote sustainable agriculture. Technological integration will enhance waste management processes, and capacity building will train staff and self-help groups in best practices. The 3 R approach will be emphasised, stakeholder collaborations will be strengthened, waste reduction efforts will continue, and community engagement activities will raise awareness and empower residents.





# **DISASTER RELIEF** TO THE POOREST



## **Distribution of** School Mits

In India, students from marginalised communities often struggle to access basic educational amenities like stationery and uniforms, essential for their academic success and sense of belonging. The lack of these resources can lead to higher dropout rates and declining academic performance, perpetuating a cycle of poverty and inequality. Addressing this issue requires collaboration among government bodies, non-profits, and educational institutions to create a more inclusive learning environment.

SEEDS with support from Avantor Performance identified schools at two locations – Dehradun in Uttarakhand and Ankleshwar in Gujarat, and the goal was to bridge the gap in access to basic educational amenities and ensure that all students have equal access to necessary resources. This would help foster a holistic learning environment that supports the involvement and success of every student.

During the distribution at a school in Dehradun, the staff highlighted that students from low-income backgrounds often struggle to afford essentials like notebooks and bags. In Ankleshwar, uniform distribution events were organised in three schools. The school staff expressed gratitude for the donations, acknowledging the significant impact on the children and thus, reaffirming the team's commitment to maintaining a long-term relationship with the schools and exploring further support opportunities.

The outcomes were tangible. Providing students with essential tools like stationery and uniforms improved their access to education, ensuring they could fully engage in learning. Uniforms also enhanced students' confidence and created a sense of belonging, fostering a supportive environment for personal and academic development. Access to these basic amenities was crucial in keeping students enrolled and reducing dropout rates. Overall, these efforts contributed to a more equitable educational experience.





## Augmenting Critical Care Equipment

Meghalaya's rugged terrain and limited infrastructure create barriers to quality healthcare, particularly for marginalised populations. SEEDS, in collaboration with PwC Singapore, provided critical medical equipment to three remote Primary Health Centres (PHCs) in Meghalaya - Siju, Sibbari, and Moheshkola - to strengthen healthcare services in the South Garo Hills district. This initiative aimed to ensure uninterrupted medical supplies for COVID-19 and other healthcare needs, improving access for far-flung communities at minimal or no cost.

By equipping the PHCs with essential medical tools, the project enhanced the public health system, reduced strain on larger hospitals, and improved the diagnosis and treatment of conditions. Through vendor engagement, logistics coordination, installation support, and post-installation monitoring, the project ensured that the equipment was delivered, installed, and utilised effectively.

The initiative also aimed to address challenges in maternal and infant healthcare, improving access, reducing hospital stays, and providing accurate diagnoses. By strengthening primary healthcare, the project contributes to a more resilient and equitable healthcare system, particularly in underserved areas.

### **Responding to** Odlisha Rall Accident

The devastating train accident at Bahanaga station in Odisha in June 2023, resulted in 288 deaths and nearly 1,100 injuries, necessitating an urgent and well-coordinated disaster response. Emergency services, law enforcement, medical personnel, and railway authorities swiftly mobilised to assess the situation, secure the area, and provide medical care to the injured. The response involved extensive coordination to manage the scene, communicate with various agencies, and ensure the safety and efficiency of rescue and recovery operations.

In the aftermath, there was a critical need for volunteers to support survivors who had lost their belongings, including essential documents and phones. The situation required extensive coordination, personal and trauma counselling, and legal assistance to help survivors and their families. SEEDS, supported by Vestas and in partnership with Aaina and coordinated by the Citizen Response Action Group, deployed and trained 50 volunteers to assist affected individuals. This effort involved a wide network of organisations to ensure comprehensive support and communication for those impacted by the disaster.

At the accident sites, volunteers established help desks at three locations and two hospitals, assisting with form-filling, medical treatment, family location, compensation, relief distribution, and the identification and handover of remains. They also offered psychosocial support to patients and their families. SEEDS initially distributed food but later focused on volunteer coordination and psychosocial support as other agencies began food distribution. Additionally, SEEDS linked the Citizen Response Action Group with the Bihar IAG to support migrant labourers returning to their native places, facilitating further aid.





### Flood Response Im Nolda

The flooding in Noida caused by record-breaking rainfall in northern India, impacted over 8,710 people and 67 villages, with 4,748 individuals displaced. SEEDS conducted an assessment, identifying urgent needs for humanitarian aid, clean water, sanitation, and house renovation. They proposed a disaster relief plan, supported by Adobe India, to assist the affected communities. Additionally, the team designed and deployed intermediate movable shelters with insulation, using local materials to provide flexible and adaptable support to the displaced populations.

Initial thorough assessments of flood damage were conducted to identify households in urgent need of shelter rehabilitation and prioritise beneficiaries based on the extent of damage. A comprehensive database was then created, allowing for targeted interventions and ensuring that aid was fairly and transparently distributed to the most vulnerable households. Project orientation sessions were essential for building community awareness and support for the shelter construction project by explaining objectives, activities, and expected outcomes. These sessions also engaged residents in decision-making, fostering transparency, trust, and a sense of ownership, which contributed to the project's success and sustainability.

Through the project, 66 damaged homes and critical infrastructure have been rehabilitated, enhancing their resilience against future floods. Community leaders have been trained to oversee construction activities, promoting local ownership and effective disaster response. Additionally, house owners have acquired construction skills through training, enabling them to actively participate in the rebuilding process and bolster community resilience.

Affected families have regained secure living spaces, allowing them to rebuild their lives and livelihoods safely. The restoration of homes and infrastructure has improved well-being and strengthened community resilience, while collaborative efforts have enhanced social cohesion and support networks. Sustaining this momentum and continuing support for vulnerable communities is crucial for ongoing recovery.

### **Responding to the** Flash Flood In Mandi

Following heavy rainfall and landslides in Himachal Pradesh in July and August 2023, SEEDS identified 10 families in the Mandi district for transitional shelters due to losing their homes and livelihoods. A needs assessment revealed over 30 affected families in Patrighat and Gehra gram panchayats living in temporary accommodations as winter approached. They were supported by both NVIDIA and Give2Asia, the team in consultation with local leaders and communities, aimed to provide immediate, weather-resistant transitional shelters to ensure the safety and well-being of these families.

The project team coordinated with district and block-level administrations, as well as local PRI members, to support the most affected villages in Mandi district, which faced significant challenges due to road and power disruptions caused by heavy rainfall and landslides. They identified the most vulnerable households in Patrighat Gram Panchayat through meetings with local leaders and affected families, selecting 10 families needing transitional shelters. After finalising the list, the team verified the families on-site, explained SEEDS' role, and arranged for shelter materials and skilled labour, with families responsible for transportation and finishing work.

The SEEDS technical team collaborated with district officials to install two shelter prototypes in Mandi, ensuring they were suited for extreme weather and sourced materials locally. Clear communication with the community was maintained throughout the process, providing information on shelter allocation and the roles of both SEEDS and the families. This approach ensured transparency and effective support for the installation of transitional shelters.

Geographic barriers, including rugged terrain and limited road connectivity, complicated the delivery of materials and construction equipment to remote villages, causing delays in shelter installation. Power disruptions further hindered progress by affecting construction activities due to unstable electricity supply. Additionally, harsh winter weather posed challenges by affecting worker productivity and material performance, requiring extra precautions to ensure the safety and comfort of both the construction teams and beneficiaries. Despite challenges, the project successfully installed 10 transitional shelters to address their urgent needs.





#### गेहरा व पटडीघाट में आपदा प्रभावितों को बांटे फेब्रिकेटेड मकान लर्निंग प्लेटफार्म उपलब्ध हुआ।

प्रभावित पंचातों पटडीघाट व गैहरा

के प्रधानों विधि चंद और रूपलाल

ने बताया कि बीते वर्ष अगस्त

महीने में दोनों ही पंचायतों में भारी

तबाही हुई है। लोगों के घर, जमीन,

खेत-खलियान गोशालाएं बह गई।

कई लोगों के सर पर छत भी नहीं

रही। वन भूमि में बने मकानों का

मआवजा आपदा के तहत उन्हें

नहीं मिल पाया। जबकि सबसे

ज्यादा जरूरतमंद यही लोग थे। ऐसे

में कंपनी की ओर से इन गरीब

परिवारों की मदद की गई। सीड्स

संस्था की को-फाउंडर डॉ. मनु

गुप्ता ने कहा कि संस्था 1994 से

ही आपदाओं में प्रभावितों को राहत

पहुंचाने के काम में सक्रिय भूमिका

निभाती आई है। हिमाचल में यह

2004-05 से कार्यरत है। सीड्स,

हिमालयी क्षेत्रों में संभावित भकंपों

और भू-स्खलनों के मददेनजर

शोध, पारंपरिक जानकारी और

हिमाचल दस्तक 🛽 मंडी

गेहरा और पटडीघाट में पंचायतों के आपदा प्रभावितों को एक संस्था ने फेब्रिकेटेड घर बांटे हैं। संस्था ने ही मौके पर जाकर खद ही इन घरों को स्थापित भी किया। इनता ही नहीं इसमें बिजली और पानी, शौचालय की भी व्यवस्था की गई है। प्रार्रोभक चरण में इस संस्था ने 20 प्रभावितों को घर बाटे हैं। यह सराहनीय प्रयास स्वयंसेवी संस्था सीडस सस्टेनेबल एन्वायरनमेंट एंड ईकोलॉजिकल डेवेलपमेंट सोसायटी ने किया है।

गौर रहे कि आपदा में 20 गरीब परिवारों की जमीन और मकान ध्वस्त हो गए। भरी बरसात में परिवार सहित स्कूल और लोगों के घरों में आश्रय लेना पडा था। ऐसे वक्त में स्वयंसेवी संस्था सीडस सस्टेनेबल एन्वायरनमेंट एंड ईकोलॉजिकल डेवेलपमेंट सोसायटी ने इन गरीब परिवारों की

मदद के लिए हाथ बढाया। संस्था ने

अपनी आश्रय इंडिया रेस्पॉन्स पहल

के माध्यम से प्रभावितों के लिए

राहत कार्यों की शुरुआत की।

जिसके चलते सीडस ने मंडी जिला

के सरकाघाट उपमंडल की पटड़ीघाट और गैहरा पंचायतों के

20 ऐसे परिवारों की पहचान भी

की जो इस तबाही में अपने घरों को

ही नहीं बल्कि आजीविका के

साधनों को भी खो चके हैं।

स्थानीय स्तर पर पंचायतों के साथ

परामर्श और जमीनी मल्यांकन के

बाद सीइस ने कुछ जरूरी

परियोजनाओं की पहचान की ताकि

इस प्राकृतिक संकट से निपटा जा

सके। अस्थायी शैल्टरों के जरिए

लोगों की तात्कालिक जरूरतों को

पुरा कर उन्हें सदीं से सुरक्षा प्रदान

की गई और साथ ही, इन गृह-

स्वामियों को भी निर्माण संबंधी

कौशलों को सीखने के लिए एक

मंडी के 20 परिवारों को आश्रय इंडिया रेस्पॉन्स योजना के तहत मुहैया करवाए घर



बचाव आदि के बारे में उल्लेखनीय योगदान करता रहा है। सीड्स प्राकृतिक आपदाओं को देखते हुए, हिमाचल राज्य आपदा प्रबंधन योजना में महत्वपूर्ण पार्टनर है, और

इन परिवारों को मिले आशियाने संस्था ने जिन परिवारों को ये कमरे उपलब्ध करवाए गए है। उनमे पटडीघाट पंचायत के प्रेम राम, सुरजन राम, नानक चंद, रोशन लाल, गुलाब सिंह, भूप चंद, रोशन शर्मा, मजनू राम, चंद्रमणि, कला देवीं, रूम देवी, ऋषि केश, टेक चंद, वाम पंचायत गेहरा के गौरीदत्त, हेत राम, अमी चंद, पन्नू राम, दत्त राम, मेध सिंह, लीला देवी आदि के परिवार शामिल है।

यह स्कूलों की सुरक्षा के लिए रेट्रोफिटिंग के साथ-साथ समुदायों को भी प्राकतिक आपदाओं से निपटने की तैयारी से जुडे कार्यक्रमों में सक्रिय भूमिका निभाता रहा है।



## **Rebuilding Lives** after the Flood In Cachar

The project aimed to support the most marginalised and vulnerable people affected by floods in the Cachar district by addressing their immediate recovery needs. It also focused on building long-term resilience by integrating Disaster Risk Management (DRM) practices into their daily lives. Supported by the Center of Disaster Philanthropy, it focused on restoring flood-affected school infrastructure, benefiting over 1,300 children by ensuring continued education and psychological recovery. Solar panels installed on school buildings provided an uninterrupted power supply and promoted environmental sustainability.

Disaster risk management (DRM) training empowered over 5,500 individuals, enhancing community preparedness and resilience through skills like search and rescue. The installation of terra filters ensured clean drinking water for 2,000 individuals, reducing waterborne disease risks and fostering community ownership of hygiene practices. Restoration of health facility infrastructure, including solar-powered primary health centres, improved healthcare accessibility during emergencies.

Despite challenges like procurement issues, skilled labour shortages, and fluctuating water levels, the project significantly improved infrastructure, health outcomes, and community engagement in disaster risk reduction. Overall, the project's comprehensive approach strengthened resilience, supported recovery, and promoted sustainable development in disaster-prone areas.



## **Providing Relief :** Gyglong Mighaung

Cyclone Michaung hit Chennai on in December 2023, causing severe flooding and damage, impacting residential areas, infrastructure, and communication networks. Major rivers and lakes overflowed, leading to waterlogging in low-lying areas and disrupting normal life. The cyclone resulted in the evacuation of over 32,158 people, with 17 fatalities and significant damage to the fishing community and MSMEs, causing an estimated loss of Rs 7,000 crore. Many people lost their homes, belongings, and livestock, facing shortages of food and basic hygiene supplies. SEEDS, supported by Vestas, provided immediate relief by distributing 693 dry food packets and hygiene kits to affected communities and workers, aiming to address urgent needs during the crisis.

The SEEDS team finalised and procured relief kits, focusing on basic hygiene needs and dietary requirements, ensuring quality and transparency in the procurement process. Coordination with district and local administration helped identify the most vulnerable families in low-lying areas like Victoria Hostel Slum and KB Dasan Road, including the housekeeping staff and caregivers at the Institute of Child Health.

The team collaborated with Greater Chennai Corporation (GCC) officials and worked with volunteers from the Madras School of Social Work and Madras Christian College to conduct a household survey, ensuring accountability and transparency in beneficiary selection. Tokens were distributed to eligible families, informing them about the relief distribution process, with complaint numbers provided for any grievances. Relief materials were distributed at designated points with clear communication, prioritising vulnerable individuals, and ensuring an organised and transparent process. SEEDS also involved local community representatives to ensure smooth distribution and address the community's needs effectively.



## **Providing Relief after** Gyglong Biparjoy

The Biparjoy cyclone made landfall in June 2023 as forecasted, and although the initial damage was lower than expected at the landfall location in Gujarat, it was severe in Rajasthan. SEEDS's long-term volunteers facilitated the efficient flow of information and operations.

Initially, the team expanded its coverage to 16 Gram Panchayats across 2 blocks, targeting 3,995 households and 21,844 individuals, based on government requests and the severe impact on impoverished populations. Fagaliya and Serwa, the most affected and economically vulnerable areas, were selected for intervention, focusing on socially marginalised groups, including those with disabilities and single women-headed households. SEEDS, in collaboration with CARITAS, conducted detailed needs assessments with local volunteers and government officials to ensure a targeted and inclusive response. Relief distribution and complaint redressal committees were formed at the village and lock levels to facilitate community involvement and ensure effective delivery and transparency.

SEEDS established two committees – Relief Distribution and Complaint Redressal Mechanism (CRM) – to manage the cyclone response effectively. The Relief Distribution Committee was responsible for verifying and finalising the list of households, overseeing the distribution process, and ensuring adherence to humanitarian standards. The CRM Committee, formed at the block level, maintained order and addressed grievances during the distribution. SEEDS implemented a robust procurement process with open tendering and quality checks to prevent corruption and organised the storage and distribution of relief materials in an orderly manner, ensuring transparency and community engagement throughout the process.

At the distribution sites, suggestion and feedback boxes and banners with contact details were set up to facilitate community input and ensure transparency. Relief committees and volunteers verified family tokens, assisted those who could not attend, and collected acknowledgements for received aid. Despite the forecasted risk, the program had to adapt quickly as the major impact was in Rajasthan, leading to delays in response and assessment.

## Forecast-based Early Responses after Gyclong Biparjoy

In June 2023, Cyclone Biparjoy made landfall in Gujarat and Rajasthan, causing significant damage, disruption, and loss of life, prompting extensive rescue and relief efforts. A study in the affected areas of Barmer and Kachchh explored the socio-economic dynamics, resilience strategies, and effectiveness of the early warning system, offering insights into the community's experiences and adaptive capacities during the cyclone.

START Network provided support to SEEDS and Caritas India to assist over 24,000 people affected by the cyclone. The support included Disaster Risk Reduction and Early Warning training, protection sensitisation, distribution of hygiene/WASH kits, cash assistance, and shelter rehabilitation activities aimed at addressing immediate needs and reducing short-term hardships. These interventions sought to enable continuous access to essential resources and strengthen infrastructure resilience against future storms. An analysis was conducted to assess the relevance, efficiency, effectiveness, and impact of these efforts at both community and individual levels, informing best practices for supporting vulnerable populations in anticipated disasters.

The project was not without challenges. Logistical difficulties were encountered due to the area's remoteness and the dispersed population. Cultural and linguistic diversity further complicated data collection, but the project team successfully adapted methodologies to ensure a comprehensive understanding of the anticipatory actions and their impact.

The surveys and focus group discussions revealed significant damage to cotton crops in the areas, severely impacting the livelihoods of communities reliant on agriculture. The economic stability of affected households was threatened, raising concerns about the long-term repercussions on the agricultural sector. The cyclone caused varying levels of damage to homes, leading to reduced income and loss of assets for many residents. The hyperlocal early-warning system proved highly effective, with timely alerts enabling communities to take proactive measures, safeguarding lives and property. However, the study found that the effectiveness of anticipatory actions was diminished when early warnings were issued less than 12 hours before the event. Overall, the findings emphasised the importance of timely information dissemination in enhancing resilience and mitigating the adverse effects of natural disasters.





# **RESILIENT** LIVELIGODS



## An Integrated Approach to Women's Livelihood Generation and DRR in Bihar

The Bihar Sustainable Livelihood Development (BSLD) project continues to make significant strides in improving the lives of marginalised communities in Bihar. With the support of Heifer International, SEEDS has successfully expanded its efforts to address hunger, poverty, and environmental challenges in the Biraul subdivision of Darbhanga district.

53,741 individuals across 8,000 households have directly benefited from the initiative, with a primary focus on hunger, poverty, and environment. Moreover, 2,14,964 individuals have been indirectly impacted through the project's community-based interventions, awareness programs, and capacity-building efforts. The focus has been to scale efforts to ensure sustainable livelihoods while enhancing disaster preparedness and resilience in vulnerable communities

Recognising the recurrent disasters in Darbhanga, particularly floods and droughts, the project has strategically integrated Disaster Risk Reduction (DRR) and innovation components. Activities such as community awareness programs, installation of river gauges, and early warning systems, have significantly enhanced community resilience. The formation of a community-level Task Force, involving Panchayati Raj Institutions, community volunteers, and NGOs, has further strengthened the organisational framework at the panchayat level.

In August 2022, a two-day Training of Trainers (ToT) on Early Warning Systems was conducted, equipping community facilitators with vital skills in disaster preparedness, search and rescue, and early response. This training, which included participatory methods and simulations, emphasised the importance of community-managed early warning systems, crucial for minimising loss of life, property, and livelihoods. Moreover, the Sonpur Fair provided a platform to showcase the DRR project to over 9,809 visitors increasing awareness and appreciation for the project's integrated approach to risk management and climate adaptation.





## Building Resilient Societies

Supported by the Paul Hamlyn Foundation (PHF), SEEDS undertook a crucial initiative to identify and address the needs of 225 districts in India vulnerable to climate-induced disasters. These districts, with an expected population of 30 crores by 2030, require strong local leadership to build resilience against such challenges. To this end, SEEDS partnered with 11 NGOs from Odisha, West Bengal, Assam, and Bihar, regions particularly prone to climate disasters. The selected organisations underwent a thorough due-diligence process before formalising their partnership through a participatory strategy development exercise.

To effectively enhance these NGOs' capacity to respond to disasters, SEEDS conducted a comprehensive capacity mapping exercise. This involved physical visits to partners in Odisha and detailed discussions with key personnel to identify their specific training needs. The identified areas for capacity building included Humanitarian Needs Assessment, Project Proposal & Appeal Preparation for Emergency Response, Emergency Operation & Management, Leadership Skills Development, and Essentials of Humanitarian Practice. These essentials covered crucial topics such as humanitarian standards, genderbased violence, continuity of education and health services, and WASH (Water, Sanitation, and Hygiene) promotion. In response to these needs, SEEDS developed customised training modules.

Key training sessions conducted included a five-day virtual training on "Post-Disaster Humanitarian Needs Assessment," which saw the participation of 42 individuals from partner organisations. This training covered critical aspects of post-disaster assessments, including approaches, tools, and sectoral focus. Additionally, a five-day residential training on the "Essentials of Humanitarian Practices" was held in Bhubaneswar, involving 29 participants from all 11 partners. This training covered the international relief system, disaster management in India, humanitarian principles and laws, and included practical simulations. A three-day exposure visit to Puri was also organised, where 24 participants observed successful models of cyclone centres, school safety initiatives, resilient health institutions, and WASH infrastructure, providing them with practical examples of community-managed disaster resilience strategies. Following this, two partner organisations - Jubayer Masud Educational & Charitable Trust and NYDHEE - successfully raised funds during recent emergencies in Assam and Odisha by applying the skills and knowledge gained through the PHF supported activities.

While some activities, like the training calendar, faced delays due to emergencies in Assam and Odisha, these were justified as necessary for immediate disaster response. Despite these challenges, the activities have significantly bolstered the disaster readiness of the partner NGOs. These organisations are now better equipped to lead preparedness and resilience-building efforts, ensuring that their developmental work continues uninterrupted by disasters.

### **Building Resilience** and Enabling Communities to Face Disasters

India has seen an increase in intense heatwaves affecting cities and vulnerable populations, causing health crises, with numerous heat-related illnesses and fatalities. SEEDS, supported by Give to Asia, launched a comprehensive intervention in East Delhi's Kishankunj community to combat rising temperatures and enhance resilience to heatwaves. The project focused on a vulnerable population of migrant labourers and daily wage earners, addressing their needs through community engagement, infrastructure improvements, and awareness campaigns. Kishankunj's susceptibility to heatwaves, fire risks due to makeshift housing, and flooding due to its low elevation were identified as key vulnerabilities. These efforts aimed to mitigate the compounded risks faced by this marginalised community.

The initiative trained 20 women volunteers on climate change and conducted awareness campaigns, reaching over 4,000 students and workers. Volunteers, including Anganwadi members, civil defence personnel, and traffic police officers, received government-approved training on heatwave awareness and disaster preparedness.

Infrastructure improvements included installing bubble wrap aluminium insulation sheets on 70 vulnerable households in the area. Two water stations were also repaired ensuring access to safe drinking water for residents and passers-by, which was supported by the Residents' Welfare Association (RWA), revitalising previously non-functional stations.

The project mobilised the community to create comfort spots to mitigate the effects of extreme heat using green net shading, bottle shading, and fabric shading, all of which used recycled materials to provide relief and foster community engagement. These initiatives not only offered respite from the heat but also contributed to waste reduction through recycling. Additionally, a Heat Refuge Space was established to provide a secure and comfortable environment for vulnerable individuals during severe temperature extremes.

Moreover, the programme focused on equipping students with the knowledge and motivation to become proactive environmental stewards. By targeting five strategically selected schools, the initiative aimed to maximise its reach and engage students from diverse backgrounds. Information, Education, and Communication (IEC) materials focused on cool roofing solutions and extreme weather guidelines were also strategically installed in Anganwadi centres and Primary Health Centres (PHCs).

The project led to a significant reduction in heat-related illnesses as trained women volunteers effectively spread awareness about heatwave risks and preventive measures. Improved education and school attendance were achieved by reducing classroom temperatures through insulation, enabling students to attend regularly and focus better. The installation of cooling measures, such as insulation sheets and street shading, resulted in a temperature decrease of up to 8 degrees Celsius. These efforts managed to focus on both immediate relief and building long-term resilience against heatwaves.







## **INNOVATION FOR** DISASTER PREPAREDNESS



## Akshvi: National Disaster and Climate Loss Platform

In India, the primary challenge is the lack of integrated strategies linking climate change and disaster risk reduction, with limited coordinated national and state-level policies. This disjointed approach is exacerbated by the absence of comprehensive disaster data, leading to insufficient economic loss information. Marginalised communities, especially those dependent on weather-sensitive livelihoods like rain-fed agriculture, face heightened socio-economic risks, compounded by inadequate disaster funding. The widespread vulnerability of regions to extreme disasters highlights the urgent need for cohesive, data-driven, and adequately funded strategies to address these complex issues.

Akshvi is SEEDS India's digital platform designed to enhance climate and disaster resilience through technology, supported by India Climate Collaborative (ICC). Developed with Ashoka's ASPIRE programme and Societal Platform (now Centre for Exponential Change), Akshvi facilitates real-time data collection and decision-making, including tech-enabled compensation transfers via an e-wallet feature. As the first loss and damage data platform, it aggregates insights to strengthen community adaptation to climate change, provides region-specific material and financial support, and integrates market support for comprehensive assistance. The platform empowers implementation partners with valuable insights for effective climate-adaptive strategies.

Akshvi has been designed to help disaster-affected communities by making them visible, eligible, and capable of receiving assistance. The platform features "Loss Registers" that aggregated and displayed community-level loss data for various disaster categories, such as shelter and agriculture. It also includes a household-level e-wallet for recording individual losses and tracking relief assistance, which incentivises documentation. This system provided a comprehensive view of disaster impacts, facilitating better assessment and support.

SEEDS has effectively engaged with NDMA, building trust and facilitating field testing across India, leading to partnerships with four SDMAs and a successful agreement with Uttar Pradesh, while Rajkot Municipal Corporation is interested in piloting the project. The project has highlighted gaps in loss and damage data through national and international reports, with positive feedback on AI tools like Apurva. The pilot phase demonstrated the platform's capability for multi-channel data collection and the creation of e-wallets and distress maps, generating 2,000 real-time Disaster IDs for households. Akshvi's implementation is expected to empower vulnerable communities to self-report losses, attract private sector engagement, and provide real-time data for efficient resource allocation and response to challenges.





### **Green Building** Cortification Project

The Green Building certification project, initiated by IIFL in Guntur and Vijayawada in Andhra Pradesh, aimed to provide EDGE certification to 500 properties financed by IIFL, with SEEDS providing technical and implementation support in several areas. This includes conducting workshops and training for stakeholders on sustainable construction practices, performing site visits and advising homeowners on green building elements, and ensuring that at least 500 homes meet green certification standards. SEEDS will also assist in obtaining certification documentation and construct a demo house, and raise awareness of homeowners, contractors, and masons on green buildings.

By February, SEEDS had identified and corrected coordinates for 150 properties out of a total of 500 shared by IIFL. To expedite the process, the team focused on baseline surveys and plot locations while another conducted home visits for green certification. The baseline survey team completed assessments for 170 properties, while the green certification team visited 40 properties. Moreover, workshops have been planned to raise awareness and promote the adoption of green building techniques, including inception, community, and contractor-specific sessions, with a focus on linking homeowners with contractors and green material suppliers, and three have been conducted in different communities.

Surveys, field visits, and workshops revealed that homeowners have some awareness of green building elements but lack detailed information on the seven features required for certification. Cost constraints also pose a challenge for homeowners. SEEDS is working to motivate homeowners through visits and workshops, but addressing the financial barriers remains necessary.

## **Digital Wallets for Climate Loss and Damage**

The National Loss Platform (NLP) is an innovative project designed to provide resources for communities impacted by climate-related disasters by creating disaster loss wallets on a large scale. Utilising advanced digital technology, NLP aims to accelerate climate action and improve development response to disasters. SEEDS has engaged with key government and private sector leaders, including senior officials from Andhra Pradesh and Odisha State Disaster Management Authorities, to present the NLP concept and secure their support. These partnerships are crucial for advancing the NLP and building long-term resilience against climate-induced challenges.

To ensure the NLP initiative's success, Sattva Consulting was selected as the knowledge partner through a rigorous procurement process, starting their role in January 2024 to provide expert guidance, analysis, and recommendations for improving disaster management and community resilience.

The NLP aims to address community vulnerability and urgent needs by incorporating feedback from social sector experts and leveraging the expertise of the Societal Thinking team (Centre for Exponential Change). This team has played a key role in designing and developing the platform, ensuring it is robust, scalable, and responsive to disaster management challenges. Additionally, their efforts in fostering cross-sector partnerships have built a supportive ecosystem. It also used Apurva.Ai - that transforms data-driven decision-making and automation through AI and machine learning, during the pilot in Himachal Pradesh and Rajasthan to analyse survey data and generate a report on community distress. The analysis revealed that affected communities value empathy and compassion from their government, highlighting the need for a people-centric approach in disaster response that prioritises genuine engagement and support.

Moreover, the team has also engaged a team of sectoral experts to analyse community vulnerabilities, focusing on government policies, relief systems, and sector-specific challenges. Their goal is to assess the effectiveness of existing policies, identify obstacles in relief operations, and understand the underlying issues faced by affected populations. This expert insight will help the team refine NLP.

The team planned and executed a pilot project in Barmer and Mandi. Each surveyed household received a unique Disaster ID for precise tracking, and a code-based user interface (UI) for the NLP was developed to integrate and manage data effectively. The study, covering about 2,000 households with a comprehensive 200-question survey, produced detailed data on community needs and incorporated features such as a distress map and a dashboard to visualise key metrics and beneficiary profiles.

The project team has also developed a minimal questionnaire to assess heatwave impacts, with data collected via SMS through Kobo forms, stored on the CRO server, and then analysed. A sample survey in Gorakhpur successfully highlighted field challenges and led to a multi-modal approach using IVRS, WhatsApp Chatbot, and Kobo forms to address issues like smartphone access and internet connectivity. Delays in government permissions and technical issues with data integration and server access impacted initial testing, prompting a shift towards testing in flood-affected districts with ongoing development of a minimal questionnaire for broader applicability.



### Artificial Intelligence for Building Disaster Resilient Communities

In 2023-24, SEEDS advanced its mission of leveraging technology for disaster preparedness and climate resilience with the development of the Sunny Lives AI model, in partnership with Microsoft. This innovative tool provides hyper-local risk assessments to vulnerable communities across India, focusing on natural hazards like heatwaves, floods, earthquakes, and cyclones. By analysing data from sources like satellite imagery and meteorological reports, Sunny Lives delivers precise predictions, enabling timely evacuations and resource allocation in disaster-prone areas.

One key deployment was in Delhi, where the model identified neighbourhoods most at risk, allowing local volunteers and SEEDS teams to act swiftly. Beyond technology, SEEDS emphasised community engagement, conducting awareness campaigns and training sessions to teach residents how to respond to disaster warnings. This community-centric approach ensures that the AI model translates into life-saving actions.

SEEDS also expanded Sunny Lives through strategic partnerships with government agencies, universities, and NGOs. Collaborations, like with the Sikkim State Disaster Management Authority, integrated Sunny Lives data into national systems, amplifying its impact. The installation of model weather stations and community protocols further showcased the technology's practical applications in disaster preparedness.

### **Under the Umbrella:** Empowering Communities Against Extreme Heat

In early March 2024, SEEDS launched the #UnderTheUmbrella campaign to raise awareness about the dangers of extreme heatwaves in North-Western India, supported by the Rohini Nilekani Philanthropies Foundation. This effort was driven by increasing reports of heat stress in vulnerable communities. Renowned photographer Sri Kolari captured images of communities in Delhi and Vijayawada coping with the heat, which were featured in a social media campaign to highlight the issue.

The campaign included training ASHAs in the National Capital Region on Heat Risk Assessment and distributing a Do's and Don't list in affected areas, educating communities on how to combat heat stress. Posters in Hindi and English detailed protective measures, such as heatwave advisories and steps to care for animals.

Reaching an estimated 3.5 million people, the campaign also featured a video and a handbook in collaboration with NDMA on roof-cooling solutions. A toolkit offered practical advice to reduce heatwave impacts. In areas like Kishankunj and Vijayawada, housing flaws exacerbating heat exposure were identified and mitigated. A dedicated website was developed, featuring a heat map for regions like Delhi, Punjab, and Rajasthan, allowing residents to assess local heatwave threats and register for updates.







# EDUCATION AND REALTR



### **Learning in Motion** Digital Library Bus for School Children

The Digital Library Bus project aimed to enhance access to interactive educational resources for underprivileged students in Municipal Corporation of Delhi (MCD) schools in East Delhi. Implemented by SEEDS and supported by CHEGG India, the initiative utilised a mobile library bus equipped with laptops and a digital board to create an immersive learning environment for MCD primary school students.

By creating a stimulating learning environment, the initiative aimed to bridge the gap in digital access and support the educational journey of these students by providing laptops and a digital board. It also sought to foster innovation in learning through technology and interactive tools and enhance digital literacy skills by giving students hands-on experience with digital technology.

A bus was transformed into a digital mobile library with 14 laptops, a digital board, and internet access, redesigned for a comfortable learning environment with safety features including CCTV, a fire extinguisher, an emergency exit, and a ramp for children with special needs. Educators and experts developed interactive educational content, such as e-books and educational videos, aligned with the MCD school curriculum. The bus visited various MCD schools according to a coordinated schedule, and interactive learning sessions were conducted inside the bus, facilitated by schoolteachers using digital resources.

However, many challenges arose. Connectivity issues in some areas made accessing online resources challenging, leading to efforts to optimise internet options and explore offline learning solutions. Regular maintenance and technical support were necessary to keep the laptops, digital boards, and internet functioning smoothly. Coordinating the bus schedule with multiple schools and aligning it with students' and teachers' availability required ongoing communication and logistical planning.

Despite hurdles, the project provided MCD school children access to interactive educational resources and encouraged innovative learning by introducing new teaching methods and interactive tools, fostering creativity and critical thinking.





"টেরা ফিল ফিন্টার" পরিষ্কার পানীয় জলে সরবরাহের জন্য একটি অত্যান্ত কার্যকর এবং কম খরচের ডিভাইস, এটি কোনো মন্ত্রপাতি বা রাসায়নিক চ্টাড়াই প্রাকৃতিক উপায়ে সাধারণ জল থেকে নোংরা কণা আয়রন রং এবং গন্দ দূর করে।



ট্যাক্লগুলি মাসে দুবার পরিক্ষার করতে হবে,



শ্রুমাত্র পানীয় জল,





EDS

শুধু মাত্র পানীয় এবং রান্নার জন্য,



পশুদের স্নান করাবেননা, কাপড় বা বাসনপত্র ধ্বেন না। মান্য স্কর্মিস্ক প্রবিয়বের প্রচায়

আড়ামের কাচ্চাড়ের বন্যা মতিগ্রস্থ পরিবারের জন্য নিরাপদ জল এবং উন্নত স্বাস্থ বিধি

Photograph Credit: Siddarth Behl



# ADMINISTRATIVE EXPENDITURE AND BALANCE SHEET

#### SUSTAINABLE ENVIRONMENT AND ECOLOGICAL DEVELOPMENT SOCIETY Address:- 315, Kailash Tower -1, Mount Kailash New Delhi - 110065

INCOME & EXPENDITURE ACCOUNT	NT FOR THE YEAD	R ENDED 31st MARCH	2024
	SCHEDULE	F.Y. 2023-24	F.Y. 2022-23
<u>I. I N C O M E</u>			
Grants & Donations	[13]	17,35,99,639	15,68,44,118
Interest Income & Other Income	[14]	43,58,765	41,37,389
TOTAL		17,79,58,404	16,09,81,507
II. E X P E N D I T U R E			
Program Expenditures	[15]		
Relief of the poor		9,80,82,490	10,71,82,993
Education		-	-
Preservation of Environment		4,10,15,060	1,95,55,210
Administrative Expenditures	[16]	2,76,56,098	2,04,33,295
Non Recurring Expense	[17]	75,809	11,50,448
Depreciation		8,20,502	10,78,492
Less: Transferred to Asset Fund		(8,20,502)	(10,78,492)
TOTAL		16,68,29,456	14,83,21,946
III.EXCESS OF INCOME OVER EXPENDITURE	[1-11]	1,11,28,948	1,26,59,560
TRANSFERRED TO GENERAL FUND		42,75,956	33,89,343
TRANSFERRED TO PROJECT FUND		1,16,76,111	1,57,42,389
TRANSFERRED TO DISASTER RESPONSE FUN	D	(48,23,119)	(64,72,172)
		-	-

Significant Accounting Policies and Notes to Accounts

The schedules referred to above form an integral part of the Financial Statement.

For & on behalf : S.Sahoo & Co. Chartered Accountants Firm No. 322952E

A a

CA (Dr.)Subhajit Sahoo, FCA, LLB Partner M. No. 057426

Place: New Delhi Date: 17th September 2024 For & on behalf :

[19]

Sustainable Environment and Ecological Development Society



Vice President

Anshu Sharma Secretary

#### SUSTAINABLE ENVIRONMENT AND ECOLOGICAL DEVELOPMENT SOCIETY Address:- 315, Kailash Tower -1, Mount Kailash New Delhi - 110065

			Amount in Rs.
BALANCE SHE	ET AS AT 31st MAR	CH 2024	
	SCHEDULE	F.Y. 2023-24	F.Y. 2022-23
SOURCES OF FUND			
I.FUND BALANCES:			
a. General Fund	[01]	2,99,21,826	2,56,45,869
b. Project Fund	[02]	5,08,04,342	3,91,28,230
b. Corpus Fund	[03]	46,77,711	46,77,711
b. Asset Fund	[04]	24,75,048	32,62,741
b. Disaster Response Fund	[05]	1,80,80,472	2,29,03,591
TOTAL Rs.	[I+I]	10,59,59,398	9,56,18,142
APPLICATIONS OF FUND			
I.FIXED ASSETS			
Gross Block	[06]	99,81,593	88,31,145
Add: Addition		75,809	11,50,448
Less: Deletion		43,000	
Less: Accumulated Depreciation		75,39,354	67,18,852
Net Block		24,75,048	32,62,741
II. INVESTMENT	[07]	2,39,57,585	3,23,13,018
III.CURRENT ASSETS, LOANS & ADVANCES:			
a. Loans & Advances	[08]	21,50,042	18,43,071
b. Cash & Bank Balance	[09]	7,80,23,242	5,87,19,965
c. Other Current Assets	[10]		1,11,556
	А	8,01,73,284	6,06,74,592
Less: CURRENT LIABILITIES & PROVISIONS:			
a. Expenses Payable	[11]	-	8,443
b. Other Current Liabilities	[12]	6,46,520	6,23,764
	В	6,46,520	6,32,209
NET CURRENT ASSETS	[A-B]	7,95,26,764	6,00,42,38
TOTAL Rs.	[I+II+III]	10,59,59,398	9.56.18.14

Significant Accounting Policies and Notes to Accounts [19] The schedules referred to above form an integral part of the Financial Statement.

For & on behalf : For & on behalf : S.Sahoo & Co. Sustainable Environment and Ecological Development Chartered Accountants Society Firm No. 322952E EDS G CA (Dr.) Subhajit Sahoo, FCA, LLB Ma au Gy Anshu Sharma Partner ice Presi ent Secretary M. No. 057426 Place: New Delhi Date: 17th September 2024





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