



# From Delhi To Bihar- How Communities Became Battle Ready for Disasters



SEEDS worked on projects across India to institutionalise sustainable CBDRM practices.

Disasters wipe out economic gains and in a country like India they often leave trails of destruction that take years to heal. Institutionalising sustainable Community Based Disaster Risk Management (CBDRM), therefore, is crucial to making sure the country's development gains continue to thrive and benefit people. The Global Network of Civil Society Organisations For Disaster Reduction (GNDR) partnered with SEEDS for the USAID-funded project to motivate and train communities to invest time and resources secure their futures against disasters.

Here is a list of projects that SEEDS took up, along with partner organisations, to demonstrate the necessity of institutionalising CBDRM.

### **Citizens Forum - Purvi Delhi Apada Prehri [PDAP], East Delhi District**



Delhi is vulnerable to a host of disaster risks owing to its proximity to an active seismic faultline and its location on a river basin. The city's vulnerability is compounded by the population growth it has witnessed, unemployment, social inequities, poor housing and public services — factors that magnify the effect of a disaster.

To address these multiple factors comprehensively, SEEDS mobilized a Citizen's Disaster Watch Forum comprising key influential individuals in the most vulnerable East District of the city. The members of this forum included representatives of existing local

neighbourhood associations, academicians living in the area, retired government officials and youth. A bottom-up “pressure” was created on various line departments of the local government through proactive action where citizens took upon themselves to participate in several civic services for the locality.

The premise of establishing the Forum was to facilitate a dialogue between local government and citizens to bridge the gap between policies and practices at the district level. A healthy partnership is now in place. Regular interactions are leading to improvement in service delivery, improvement in grievance redressal and mutual support activities in public programmes. This model of participation in welfare activities has various benefits and can be leveraged for the following:

- Raising awareness amongst the communities by linking everyday disasters to underlying vulnerabilities.
- Promote localised advocacy that compels local government machineries to work proactively.
- Gives locals the power to evaluate disaster risks and demand mitigation actions by public authorities.



## Surviving floods in Bihar



In 2008, the Kosi river (known as the sorrow of Bihar) changed the course and shifted eastwards, retreating to the course it had abandoned about 300 years ago. In the process, it breached the embankments and inundated numerous towns and villages. The floods caused by the alteration in the river’s course wreaked havoc in areas that had no system in place to fight floods because they had never experienced one.

Bihar, one of the poorest states in India, witnessed catastrophic damage to livelihoods and property. Over three million people were affected, and more than 200,000 homes were damaged.

In the light of this destruction and the knowledge that floods are a recurring phenomenon in Bihar, it became critical that the state government practices advocacy for sustainable housing. This included emphasising the need to use of bamboo, an easily available local resource to build houses. It was also necessary to embrace incorporation of Disaster Risk Reduction (DRR) technologies while constructing houses.

The state government endorsed the idea proposed by SEEDS and sanctioned funds to the affected families under the Indira Awas Yojana scheme. The government assembled a network of institutions and agencies from all over Asia to form the Owner Driven Reconstruction Collaborative (ODRC) which consisted of UNDP, Indian central and state governments and SEEDS among others. The role of ODRC was to assist the government in policy formulation and implementation.

SEEDS helped lead the construction and design of this massive rehabilitation shelter cluster of 30,000 houses through its eight training and facilitation centres called Kosi Setu Kendras. These centres bridged the gap between government administration and communities. These Setus or 'bridges' played a pivotal role in training local engineers, masons, social workers on safe building techniques and providing information about the critical components of the programme to the homeowners and other stakeholders.



## The Flood Resilient Environmentally Enhanced Disaster Management Project (FREEDM)

The project, supported by Lutheran World Relief helped communities, adapts to the changing risks. Simple early warning systems, bioshield, nurseries for bamboo and banana plants, the community disaster resilience fund (CDRF), insurance support to farmers, grain banks, alternative short term crop technique were some of the strategies that communities embraced during the project.



Seventy six percent of the population in North Bihar live under the recurring threat of floods. When heavy rains occur in the mountains of central and eastern Nepal — which shares a border with Bihar — the water flows into the rivers Narayani, Bagmati, and Koshi. As these rivers cross into India, they flow into the plains and lowlands of Bihar, often leading to floods.



For a long time, the state did not have an upstream and downstream Early Warning System even though such a system could potentially save 90% of lives and livelihoods. In 2018, a task force formed by the residents of the Kothiya Village worked with SEEDS to create a community-managed rudimentary early warning system.

This system was financed by the panchayat development funds and money from the 14th finance grant of the panchayat. The system was established in Saharsa district along the Kosi river. Task Force members of Kothiya village monitored downstream Kosi River data through the installation of river gauge in the village and upstream data from Chatara, Nepal through a Nepal government website.

In 2018, when a second flood hit the inhabitants of the villages along Kosi river, no lives were lost due to the early warning system. Property damage was also insignificant. Twenty villages and more than 27000 people got proper warning messages before the floods, thanks to the system. Preparing a community from floods also involves making sure they have access to hygiene and clean drinking water during and after the disaster.

SEEDS in partnership with CAF carried out an intervention to increase the accessibility to safe drinking water for families residing in 10 hamlets in Sonbarsa block of district Saharsa. The SEEDS technical team trained with the Institute of Minerals & Materials Technology, Bhubaneshwar to create a system of using terra filters to remove impurities from drinking water. The filtration disk is produced with a mix of ordinary red clay, river sand and sawdust, without the use of any chemicals. The mixture is sintered at high temperatures leaving large pores in between. The residue gets deposited on the surface of the terra filter but can be easily scrubbed off to reopen the pores. These filters remove turbid particles, iron and bad odour from the water. While the disk can be made in any shape, the circular is preferred due to its high strength and easy maintenance. Five filters were installed, each with a capacity of purifying 1000 litres of water per day. Together, they serve 620 families (over 1800 people). As the terra filters are low on cost, high on strength, come with a long shelf life and don't need electricity to work, it is a perfect example of a sustainable innovation.

