

REACT

City Preparedness, Monitoring and Emergency Response Systems

Ankur Negi | Ipsita Chanda | Sai Varsha Akavarapu | Shikha Singh

External Mentor: **Dr. Umamaheshwaran Rajasekar**

Internal Mentor: **Dr. Anshu Sharma**

BACKGROUND:

In the last 20 years, disasters have affected about 440 crore people in India causing over 13 lakh deaths and incurring about 6 lakh crores in loss. Despite having strong early warning systems and various disaster management plans and policies in place, it is still strenuous for Indian Administration to minimize human, animal and infrastructural losses. A major contributing factor to this, is the fact that, the approach to disaster management in India has been largely response and rehabilitation centric as opposed to being risk reductive and resilience inducing. Additionally, it was also recognized that it is the most vulnerable that are the most affected and it is them who are often not accounted for when risk assessments are conducted. This finding is further substantiated by a working paper by UNDP and IIHS, which highlights the same.

The present static scenario of disaster management needs to be addressed and shifted to a dynamic one, where: Data pertaining to previous disasters and its impacts are updated periodically and shared, rather than being in silos. The scale of analysis is shifted from a macro to a micro one, which could further contribute to a targeted emergency response. And above all, the enormous scope that digitisation presents to any sector, should be tapped into.

IDEA:

The web-based solution we propose, targets to provide a holistic view of disaster risks as well as the resilience of the city. The project as well as the tool aim to integrate the indicators of risk and resilience spatially to arrive at a final correlated score. The spatiality of the product adds to its value as it lets the user take a closer look at each unit within the city not only to pre-position the city's emergency response but also to be able to identify the short-term and long-term interventions required to be taken in order to minimise the adverse impacts of the disaster.

A phase 2 can be developed which would focus on involving citizens in the process at various levels for crowdsourcing data, grievance redressal and Risk and resilience information sharing, in order to make them more informed and prepared to deal with emergency situations.

ENVISIONED OUTCOMES:

The proposed tool could help in identifying, analysing and strategizing solutions for the shocks and stresses the risk they pose. The project tool will aid various urban and disaster professionals to identify the most vulnerable, pre-position city resources and mitigate disaster risks.

The proposed solution will also enhance the city administration's spatial understanding of the risks while ensuring that the aspect of resilience is not overlooked in the planning and decision-making processes.

REFERENCES:

- Gajjar, Sumetee Pahwa, Rohit Jigyasu, Garima Jain, Preeti Soni, G Padmanabhan, Meenaz Munshi, and Abinash Lankari. "UNDP-IIHS Joint Working Paper." (2013).
- González, Daniela P, Mauricio Monsalve, Roberto Moris, and Cristóbal Herrera. "Risk and Resilience Monitor: Development of Multiscale and Multilevel Indicators for Disaster Risk Management for the Communes and Urban Areas of Chile." Applied geography 94 (2018): 262-71.