

Disaster Preparedness Index tool developed by NITK Faculty widely used across Asian countries

Understanding and developing frameworks to quantify disaster preparedness levels is the first step that should be taken in the process of building a disaster-resilient society. In this context, Dr. Sreevalsa Kolathayar's research group from the National Institute of Technology Karnataka (NITK) Surathkal developed a tool termed Disaster Preparedness Index (DPI) to assess the preparedness level of every individual and household to face an impending disaster. It is a survey-based tool to analyze the preparedness indices of the respondents over psychological and various social factors. The Disaster Preparedness Index (DPI) is a valid and reliable tool that assesses individuals on a three-level scale with index values ranging between 0–14.

The Sendai Framework for Disaster Risk Reduction, adopted by the United Nations in 2015, mentions the importance of disaster preparedness and highlights preparedness as one of the five primacies for risk reduction. It identifies that preparedness can make communities and individuals more disaster resilient. Disaster preparedness can help communities to recover and build back better after a calamity, and preparedness alone can decrease the losses from disasters by up to 40%. The development of a tool to estimate the disaster preparedness of individuals is a step taken by Dr. Sreevalsa's research group at NITK in the direction of global disaster risk reduction in line with the UN Sendai framework for disaster risk reduction. The lack of preparedness for disasters is an essential reason for destruction in the form of lives and properties. In a developing country like India, which is vulnerable to almost all kinds of natural hazards, the preparedness level is very less, which can cause severe losses following a major disaster. The various factors affecting preparedness among the diverse population in India were explored in the research. It investigates individual/household preparedness based on their actions before and during the occurrence of a disaster and also looks into the psychological factors influencing the preparedness of individuals. The DPI tool developed at NITK is now used widely across Asian countries, including India, the Philippines, Indonesia, Malaysia, Bangladesh, etc., to assess the disaster preparedness of the community at local and regional levels. Dr. Sreevalsa has been receiving several requests from research groups and NGOs from various countries like New Zealand and Switzerland, and also from several Asian & African countries, seeking permission to use the NITK DPI tool for their regions. The influence factors like psychological mindset and socio-economic conditions over the levels of disaster preparedness can be analyzed using this tool.

Earlier, Dr. Kolathayar developed the Earthquake Readiness Index (ERI) tool to evaluate earthquake preparedness in India as part of preparing national guidelines for earthquake preparedness in India under the aegis of the Indian Society of Earthquake Technology (ISET) IIT Roorkee of which he was an expert member of the committee. A mobile app named BhookampRaksha App was also developed as part of the project to disseminate information on earthquake hazards in India and for self-assessment of individual preparedness level. Disaster Risk Reduction is a no-regret investment and is an integral part of Sustainable Development Goals. Creating awareness of preparedness is key to a community's risk resilience. The disaster preparedness aspects must peep into people's minds and must continue throughout generations to create a well-prepared and alert community.

Disaster preparedness is not a part of the public consciousness, even in the vulnerable regions of India. There are many things that individuals and communities can do that will reduce the havoc and loss during a disaster. These steps can be a complementary measure alongside other activities that focus on the overall development of the community; with a team spirit. Usually, the aftermaths of a disaster bring solidarity among the members of the community. There is a need to bring this spirit of togetherness and solidarity well before a disaster so that a community can be prepared well to face the disaster and thus reduce the loss of life and property. People, governments, and other groups need to be continually reminded to keep their preparedness efforts up-to-date and ongoing. Every family should update their knowledge and preparedness plans based on changes in where they work, live, or go to school.