



## ANNUAL REPORT – 2022-23

GeoHazards Society in the current financial year 2022-23 has executed a few remarkable projects partnering with international agencies like The World Bank, World Health Organisation South East Asian Regional Office, SDMAs of Assam and Kerala, and Kerala Institute of Local Administration (KILA). The organisation along with its partner agencies undertook a variety of projects focusing on enhancing structural safety, assessing the resilience of power infrastructure, GIS-based training for understanding climate risks, and enhancing preparedness of educational institutions and tabletop exercises. During the execution of these projects, GHS has worked closely with several government departments, state government officials, and agencies on various aspects of disaster risk reduction and climate change adaptation. GHS has enthusiastically partnered with the National Institute of Disaster Management (NIDM) and many SDMAs and DDMA, providing technical assistance for healthcare personnel and hospital administrators in various Indian states, Nepal and Maldives.

### NDMA-ASDMA Workshop - Revisiting the Aizawl Earthquake Scenario, Aizawl, Mizoram (2022)

GeoHazards International along with GHS has been working in Aizawl since 2013 on Earthquake and Landslide Risk Mitigation. GHI developed a scenario of the effects of an earthquake affecting Aizawl. A shaking Intensity between VII and VIII was considered and its effects on Aizawl's buildings and on utilities- roads, water supply, power and especially critical building like Schools, hospitals, etc was studied.



The major stakeholder departments include Aizawl Municipal Corporation, Public Health, and Engineering, partnered with Mizoram University (Geology, Civil Engineering, Sociology) in the process. Major outcomes of the project were the preparation of a Roadmap to Stability by the Local Body, Slope Modification Guidelines, Development of Landslide hazard maps of 1:5000 scale for the city, and the empanelment of geologists in the Aizawl Municipal Corporation for verification of slope stability before approving building plans. This Aizawl Project was cited by the National Disaster



Management Agency (NDMA) as 'an example to follow' for all hill States prone to landslides. The project also fetched the "Averted Risk Award" for the GeoHazards Team.

In May-June 2022, a week-long workshop was conducted in Aizawl "Revisiting the Aizawl Earthquake Scenario" developed earlier, by Govt of Mizoram along with the National Institute of Disaster Management (NDMA) and the GeoHazards Team to mark the 10th anniversary of the Aizawl scenario and assess the progress in DRR. Shri. Lalchamliana, Minister of DM&R along with Dr. Krishna Vatsa, member of NDMA, and senior officials from key departments working in the field including Disaster Management, Health, Education, Water supply, Electricity, the Aizawl Municipal Corporation, among other stakeholders who attended the workshop. The GHS team throughout the event helped to disseminate the effectiveness of the earthquake scenario and facilitated the preparation of an action plan for each participating department to improve disaster risk reduction and boost the resilience of Aizawl.



## **World Bank-ASDMA-APDCL Study: Seismic Resilience of Power Infrastructure in Guwahati City, Assam, 2022-2023**

GeoHazards Society along with the GeoHazards International worked on this World Bank Project to study the Seismic Resilience of Power Infrastructure in Guwahati City, Assam. The vulnerability assessment of the transmission and distribution infrastructure of the power department was reviewed. It included the assessment of the 3 Critical buildings assigned by ASDMA - Deputy Commissioner's Office (Kamrup Metro), SEOC at the Secretariat and Emergency Building, & Guwahati Medical College and Hospital. A total of 41 substations were visited by the team. An extensive walk-down survey of each substation in the study area was done by the GeoHazards team instead of a sample survey as in the scope.





A detailed study report was presented to the World Bank, Assam SDMA, and Assam Power Development Corporation Limited, to recognize the present situation and plan for improving the disaster resilience of the power infrastructure.

### **World Health Organisation (South East Asian Regional Office) - Fire Safety in Hospitals in Nepal & Maldives, 2022-2023**

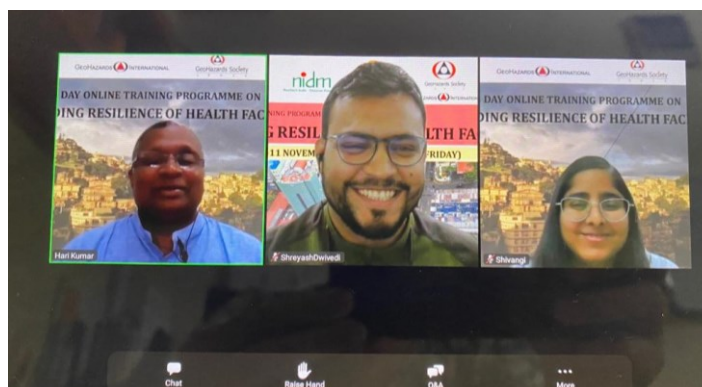
This WHO (SEARO)-GHI-GHS Project assessed the fire safety practices in healthcare facilities in South Asian countries. Nepal and Maldives were the pilot countries and 6 hospitals in Nepal and 2 in Maldives were taken for the assessment. As part of the project, GHS conducted hospital fire safety webinars for the South East Asian region. Further, three fire prevention and safety Checklists for hospitals were developed for the use of the hospital staff, and external fire auditors and specifically to evaluate the safety of field hospitals. The checklists were introduced to the hospital staff and GHS provided hands-on training to staff in Nepal & Maldives on using these checklists.



A tabletop exercise of a fire scenario involving the Patan Academy of Health Sciences, Nepal was organised online. An imaginary fire event affecting their hospital and gradually worsening in their facility was discussed and the response of the participants to various situations was assessed to understand their preparedness and prioritise risk reduction measures.

### **NIDM Project on Building Resilience of Health Facilities (Nov 2022)**

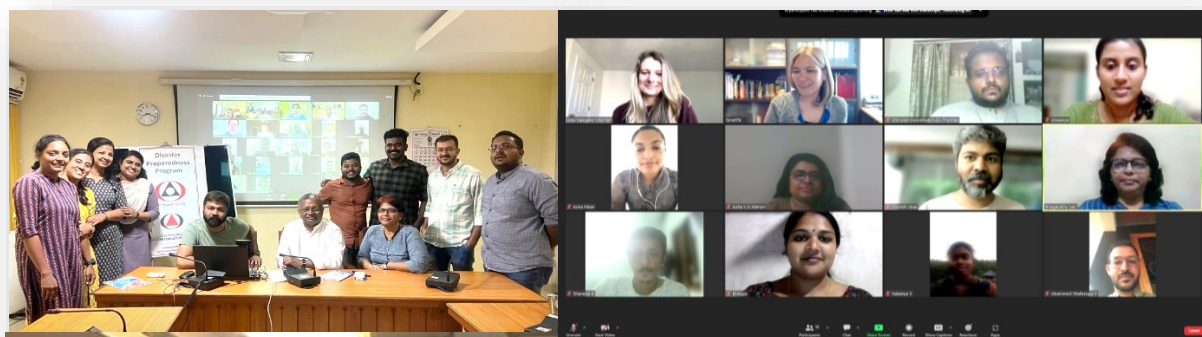
GHS was engaged by NIDM and the Health Department, Govt. of Mizoram to conduct a three-day online training program in November 2022. The training was attended by over 250 healthcare professionals, who gained practical wisdom on building the disaster resilience of hospitals. The need to form a hospital disaster management committee and other task-specific teams and laying down the roles and responsibilities of each staff member and prepare Standard operating procedures for various emergencies were highlighted. The trainees were guided on how to prepare DM plans for their health facility, disseminate the plan to the staff, and test the plan by organising mock drills.





## KSDMA-KILA-GHS-Woodwell Climate Research Centre Project, 2022-2023

The GeoHazards Team along with its technical partner Woodwell Climate Research Center collaborated with Kerala Institute of Local Administration (KILA) and conducted a series of two online trainings on “Understanding Climate Risks for Evidence-based Planning (2023) attended by over 130 participants. The beneficiaries were young professionals engaged by KILA and KSDMA to support the local bodies in Disaster Management and Climate adaptation programmes. The trainings helped the participants develop a baseline understanding of climate risk analysis and the components, applications, and limitations of climate modelling and mapping. Participants were trained to use geospatial data to help tell stories that communicate risk effectively. In the second level training, the trainees got a deeper understanding of and knowledge in assessing climate risks through case study development, the results of which could then inform climate action and lead to solutions.



## Disaster Preparedness and Safety Training in Educational Institutions in Idukki Kerala (Sep 2022 - Jan 2023)

This was a first-of-its-kind project where the local body of the hazard-prone hilly District Idukki, invited GHS to address the safety of the educational institutions in the district. Partnering with RDO, Devikulam, and Idukki District Collectorate with funding support from KSDMA, GHS delivered a significant project that increased participants’ risk awareness and informed the importance of planning before disasters and adopting mock drills as a regular activity in their annual academic calendar.

Thirteen institutions (11 schools & 2 colleges) participated in the week-long training. Training of trainers (ToT) sessions were organized separately for the school teachers, college staff, and students. The training was attended by more than 100 teachers and students. GHS adopted a learning-by-doing methodology to familiarise hazard hunting, evacuation planning, and mapping the resources in their institutions. The GHS team visited each institution and guided the school safety committee to prepare their DM plan, finalise their evacuation routes, and practice evacuation exercises.





Finally, a Mass Evacuation drill involving a total number of 4151 students and 370 staff members from all 13 institutions was organised and a debriefing session was organised chaired by the District Collector, Smt. Sheeba George and Sri. Rahul Krishna, the Sub-Collector of Devikulam. Apart from the training, GHS also delivered IEC material - posters and multi-lingual videos on Disaster management which are published on the Idukki Collectorate Website. Involving the Block Resource Centre (BRC) team in the training by GHS has helped in continuing the training in the other schools of the district.



## Voluntary Work – School Safety trainings across India to commemorate International Day for Disaster Risk Reduction (IDRR- 13 October)

The GHS team organised School Disaster Preparedness Sensitization program on IDRR Day in Mizoram, Assam, and Kerala. The team members met with the school authorities, students and parent representatives to sensitise them on the need to prepare the school staff and students to face any disaster. The idea of preparation of Disaster management plans was introduced and mock drills were conducted in the schools.

