

Improving earthquake preparedness through geoscience education in the Himalaya

The IUGG support will enable the development and the direct implementation of an adapted earthquake evacuation protocol in Nepali schools, and thus to develop a new module in an established education program in a high seismic hazard and risk zone. It will also help to expand this seismology-at-school program further in Nepal and along the Himalayas, initiating it in Bhutan and India.

Since 2017, we are running a successful educational seismology program in Nepal (Subedi et al. 2020a; www.seismoschoolnp.org). It stands on two main pillars: the installation of low-cost seismometers to span an operational school seismic network, and the training of local teachers to teach about earthquakes and related topics including hands-on activities with the seismic sensors.

In the current proposal, we aim at developing a new module in our program: earthquake evacuation protocols and drills, adapted to the local context and environment. This would put in practice what is already taught in the classrooms, what to do before, during and after an earthquake. During and after an earthquake, life-protecting actions must be taken, and by regularly training that situation it will become a routine action for the students. Earthquake evacuation drills are an essential part of preparedness, and we intend to teach where to seek shelter and how to protect themselves and possibly others. The idea has already been applied in several countries, but is not known at all in Nepal. The 2015 Gorkha earthquake (magnitude 7.8, ca. 9,000 casualties) has seen several fatal examples of wrong reactions during the earthquake. Our objective is to step forward from earthquake awareness to earthquake preparedness, to develop a teachable, implementable, trainable protocol for Nepali schools, and to allow students to build confidence in such exercises. In parallel, we already seek to initiate similar seismology-at-school programs in neighboring regions in the Himalaya, and aim to establish these in Bhutan and India in the frame of this project.