Educational seismology in Nepali schools: tailored solutions to start a program

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Nepal is located above the convergent India-Eurasia plate boundary and has repeatedly experienced devastating earthquakes. During the 2015 magnitude 7.8 Gorkha earthquake, an often-reported experience was that people were not aware of the threatening seismic hazard and have insufficient level of preparedness. An important source of the problem is that earthquake-related topics are not part of the school curriculum. Earthquake education reaching a broad group of the population early in their lives is therefore strongly needed.

We have established an initiative in Nepal to introduce seismology in schools, which relies on two pillars: a low-cost seismic network with stations installed in schools (presented in another session) and educational activities in schools on earthquakes and the related hazards. For classical teaching, we have prepared educational materials adapted to the Nepali school system, labels and language. By using these materials, not only students in the schools but also local people in the community can learn earthquake education and follow guidelines for better preparedness. We also developed educational sessions using Raspberry Shake low-cost seismometers, for example to record earthquake waveforms and to allow learning-by-doing classroom activities.

For efficient implementation, we have organized a 2-day workshop for the school teachers to prepare them for the new teaching, which was presented by experts in the field and included lots of discussion to find the adapted level. Moreover, during our field visits, we give special lectures and also perform earthquake drills with the students. Well-prepared educational materials such as flyers and stickers are distributed to students, and demonstration tools for physics to schools. All the material from our project is freely available on our program's website: http://seismoschoolnp.org.

We have started the program by choosing 22 schools in the region, and establishing direct contact with the teachers, principals and the local communities. We found this was an efficient way to implement the project, especially in rural areas. The preliminary and personal feedbacks reflect that this program is well received. A survey-based evaluation on the program's impact on the local community is being carried out, and we plan to present results at the conference. We hope that the project is able to help this region to prepare for future earthquakes, and we seek that the
initiative is spread to other regions to make earthquake-safer communities across Nepal.