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The SISIFO project: Seismic Safety at High Schools

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For many years, the Italian scientific community has faced the problem of the reduction of earthquake risk using innovative educational techniques. Recent earthquakes in Italy and around the world have clearly demonstrated that seismic codes alone are not able to guarantee an effective mitigation of risk. After the tragic events of San Giuliano di Puglia (2002), where an earthquake killed 26 school children, special attention was paid in Italy to the seismic safety of schools, but mainly with respect to structural aspects. Little attention has been devoted to the possible and even significant damage to non-structural elements (collapse of ceilings, tipping of cabinets and shelving, obstruction of escape routes, etc..). Students and teachers trained on these aspects may lead to a very effective preventive vigilance. Since 2002, the project EDURISK (www.edurisk.it) proposed educational tools and training programs for schools, at primary and middle levels. More recently, a nationwide campaign aimed to adults (www.iononrischio.it) was launched with the extensive support of civil protection volounteers. There was a gap for high schools, and Project SISIFO was designed to fill this void and in particular for those schools with technical/scientific curricula. SISIFO (https://sites.google.com/site/ogssisifo/) is a multidisciplinary initiative, aimed at the diffusion of scientific culture for achieving seismic safety in schools, replicable and can be structured in training the next several years. The students, helped by their teachers and by experts from scientific institutions, followed a course on specialized training on earthquake safety. The trial began in North-East Italy, with a combination of hands-on activities for the measurement of earthquakes with low-cost instruments and lectures with experts in various disciplines, accompanied by specifically designed teaching materials, both on paper and digital format. We intend to raise teachers and students knowledge of the problems of seismic hazard, seismic response of foundation soils, and building dynamics to stimulate awareness of seismic safety, including seismic hazard, seismic site response, seismic behaviour of structural and non-structural elements and functional issues (escape ways, emergency systems, etc.). The awareness of seismic safety in places of study, work and life aims at improving the capacity to recognize safety issues and possible solutions