

VISUS: a methodology for the assessment of safety of learning facilities and for the transfer of scientific knowledge through the capacity building of surveyors.

Stefano Grimaz (1), Jair Torres (2,3), and Petra Malisan (1)

(1) SPRINT-Lab, Dipartimento Politecnico di Ingegneria e Architettura, Università degli Studi di Udine (Italy), (2) UNESCO, Disaster Risk Reduction and Resilience, Section on Earth Sciences and Geo-Hazards Risk Reduction, Paris (France)., (3) Understanding and Managing Extremes School, Institute for Advanced Study of Pavia, Pavia (Italy).

The impact of natural disaster and, among these, large earthquakes have major repercussions on children, youth and education systems. The United Nations 2030 Agenda for Sustainable Development calls Members States and International Organizations to “upgrade education facilities in order to provide a safe and effective learning environment” (Goal 4.a) as a way to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This requires the definition of a rational and effective strategy for risk reduction based on the level of risk, criticalities, countermeasures and financial commitment. UNESCO aims to reduce the vulnerability of the educational sector worldwide to both natural and man-made hazards, and to increase the adaptive capacity of the education sector to respond to the impacts of these hazards and climate change, while improving high-quality education for all learners. In order to account for these aspects, UNESCO and the SPRINT-Lab of the University of Udine have developed the VISUS methodology (Visual Inspection for defining the Safety Upgrading Strategies). VISUS permits the implementation of a pragmatic technical triage for planning purposes, and it is adaptable to different local contexts and needs. VISUS was first developed aiming to assess schools in a seismic scenario, but it has evolved into a holistic and multi-hazard approach. The training of surveyors on the general concepts of the VISUS methodology, together with the development and utilization of the VISUS tools, such as the handbooks and the mobile application, contribute to increase the knowledge and the awareness of VISUS surveyors on safety issues. The elicitation and pre-codification of expert reasoning processes with the “elementary scenario reasoning” technique allow the knowledge transfer to non-expert. Good responses from students involved in the trials in El Salvador, Lao and Indonesia support this statement. VISUS was firstly developed and applied for assessing the whole stock of schools of the Friuli Venezia Giulia Region (NE Italy), and successively 100 schools in El Salvador, 60 schools in Indonesia and 10 schools in Laos, and is expected to start new country assessments worldwide.