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# The historical costs to the education sector from earthquakes and tropical cyclones globally

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There are over 4 million schools and universities globally which are in the path of various types of disasters. A large proportion of these are exposed to earthquake and tropical cyclone hazard. These schools are essential to the learning and advancement of the next generation.
In this analysis, a part of a full analysis as part of an ongoing D-RAS KSB study within the World Bank, the historic losses of schools for earthquakes and tropical cyclones from past events are examined.
Over 300 post disaster needs assessments and sectoral analyses have been sourced in order to collect the education losses in these assessments over time.
In addition, the CATDAT Natural Hazards Loss Database has been used to add a significant amount of events with school damage to the historical database. Concurrently, data from national loss databases as well as other sources have been included in order to create a substantial list of more than 1000 events with damage to schools.
This empirical data informs two things: 1) the cost of natural hazards to the education sector for these two perils through history; 2) data as to the vulnerability of schools which can be used in the formulation of risk-based indices and/or vulnerability functions for use in stochastic analyses of risk modelling of schools globally.
The companion abstract to this abstract is EGU2019-10909 where a stochastic approach to analysis of global school risk and the value of schools is presented, with both parts combining together to a first order estimate of school exposure and global risk for this critical socioeconomic sector.