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GeoBest - A contribution to the long term development of deep geothermal energy in Switzerland.

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The processes and conditions underpinning induced seismicity associated with deep geothermal operations are still not sufficiently well understood to make useful predictions as to the likely seismic response to reservoir development and exploitation. The empirical data include only a handful of well-monitored EGS experiments; models are consequently poorly constrained. Unfortunately, data sets of well-monitored deep hydrothermal experiments are missing and empirical constraints of induced seismicity models for these cases do not exist. Given that the majority of the projects underway or planned in Europe are of the hydrothermal type, there is hope that this deficit can be remedied in the near future through a close cooperation of geothermal industry, science and public authorities.

The GeoBest project was initiated in Switzerland to facilitate the dialog between geothermal industry, science and public authorities. The Swiss Seismological Service (SED) is implementing the GeoBest project on behalf of the Swiss Federal Office for Energy (SFOE) to provide cantonal and federal authorities with guidelines on how to handle seismic monitoring and hazard in the framework of the environmental risk assessment. Within GeoBest, selected pilot projects in Switzerland will be supported during the necessary seismic monitoring of natural and induced seismicity. GeoBest supports the pilot project in the first two years, that are most critical with respect to the financial risk, by providing seismological instrumentation from the GeoBest instrument pool and partial financial support for the operation of the seismic monitoring network. In return the pilot projects grant SED access to project data needed for seismic hazard assessment and the development of best practice guidelines. These types of collaboration offer the unique opportunity to collect high-quality seismological data and, by combining them with relevant project data, to gain first hand practical experience for the development of best practice guidelines.