



EPOS Working Group 10 INFRASTRUCTURE FOR GEORESOURCES

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Working Group 10 “Infrastructure for Georesources” deals primarily with induced seismicity (IS) infrastructure. Established during the EPOS Annual Meeting in Utrecht, November 2011, WG10 aims to integrate the research infrastructure in the area of seismicity induced by human activity: tremors and rockbursts in underground mines, seismicity associated with conventional and unconventional oil and gas production, induced by geothermal energy extraction and by underground reposition and storage of liquids (e.g. water disposal associated with energy extraction) and gases (CO₂ sequestration, inter alia) and triggered by filling surface water reservoirs, etc.

Until now the research in the area of IS has been organized around induced technologies rather than physical problems, common for these shallow seismic processes. This has hampered the integration of IS research community and the research progress. WG10 intends to work out a first step towards changing the IS research perspective from the present, technology-oriented, to physical problems-oriented without, however, losing touch with technological conditions of IS generation. This will be achieved by the integration of IS Research Infrastructure (ISRI) and the creation of Induced Seismicity Node within EPOS.

The ISRI to be integrated has three components: data, software and reports. The IS data consists of seismic data and auxiliary data: geological, displacement, geomechanical, geodetic, etc, and last, but by no means least, technological data. A research in the field of IS cannot do without this last data class. The IS software comprises common software tools for data handling and visualisation, standard and advanced software for research and software based on newly proposed algorithms for tests and development. The IS reports are both peer reviewed and unreviewed as well as an internet forum.

In addition to that the IS Node will play a significant role in integrating IS community and accelerating research, it will help to develop a synergy between research community and industrial partners. WG10 is working out the strategic solutions for integration and core services provided by future IS node for the European and other research groups, industrial partners, educational centers, central and local administration bodies. Measurable benefit of the integrated ISRI will be the intensification of studies on hazard and risk associated with anthropogenic seismicity and on methods of anthropogenic seismic risk mitigation. Best practices will be disseminated to industrial partners and relevant bodies of public administration. It is also planned to have an information node for the public use.