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IS-EPOS – a prototype of EPOS Thematic Core Service for seismic processes induced by human operations

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The community focused on seismic processes induced by human operations has been organized within EPOS Integration Program as Working Group 10 Infrastructure for Georesources. This group has brought together representatives from the scientific community and industry from 13 European countries. WG10 aims to integrate the research infrastructure (RI) in the area of seismicity induced (IS) 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 (CO_2 sequestration, inter alia) and triggered by filling surface water reservoirs, etc. WG10 priority is to create new research opportunities in the field responding to global challenges connected with exploitation of georesources. WG10 has prepared the model of integration fulfilling the scientific mission and raising the visibility of stakeholders. The end-state Induced Seismicity Thematic Core Service (IS TCS) has been designed together with key metrics for TCS benefits in four areas: scientific, societal, economic and capacity building. IS-EPOS project, funded by National Centre for Research and Development, Poland within the program "Innovative Economy Operational Program Priority Axis 2 – R&D Infrastructure", aims at building a prototype of IS TCS. The prototype will implement fully the designed logic of IS TCS. Research infrastructure integrated within the prototype will comprise altogether seven comprehensive data cases of seismicity linked to deep mining related, associating geothermal production and triggered by reservoir impoundment. The implemented thematic services will enable studies within the use-case "Clustering of induced earthquakes". The IS TCS prototype is expected to reach full functionality by the end of 2014.