



Contributing to sustainable and geoethical use of the subsurface by improving and further developing the European Geological Data Infrastructure and subsurface information platform.

Klaus Hinsby (1), Serge van Gessel (2), Jørgen Tulstrup (1), and Tessa Witteman (2)

(1) Geological Survey of Denmark and Greenland (GEUS), Copenhagen, Denmark (khi@geus.dk), (2) Netherlands Organisation for Applied Scientific Research (TNO), Utrecht, The Netherlands

The exploitation of the subsurface resources fossil fuels, raw materials and water has been the primary driver for the development of the modern society. Current climate change and projected future climate change scenarios clearly demonstrate that especially the exploitation of fossil fuels is not sustainable in a global perspective and that this practice has to change. Overexploitation and non-sustainable use of the subsurface adds significantly to the current climate change and the threat to several planetary boundaries. Continuing this practice is unethical and irresponsible towards future generations. Fortunately, the subsurface is not just a significant part of the problem; it is also an essential part of the solutions for mitigating and adapting to climate change. A prerequisite for developing sustainable use of the subsurface and working towards the UN sustainable development goals is a sound understanding of the geological, geophysical and geochemical conditions of the upper kilometers of the subsurface and its interaction with the earth mantle materials below. It is the ambition of the GeoERA project to further develop the European Geological Data Infrastructure as a leading information platform for subsurface data in Europe and one of the leading platforms, globally. Here we briefly present the 15 projects within GeoERA and their contribution to a better understanding and geoethical use of the subsurface. GeoERA focuses on providing data for sustainable use of the subsurface to meet the UN sustainable development goals and the need for efficient solutions for mitigating and adapting to climate change.