PostMinQuake: analysis of post-mining induced micro-seismicity in former European hard coal regions.

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Underground mining operations, in which large amounts of rock are extracted, can induce seismic events. Furthermore, draining the water to prevent it from flowing into the mining works is necessary for hard coal mines. Once mining stops, the pumping rates of groundwater decrease or is no longer necessary, allowing the water level to return to its state prior to the construction of such mines. During the post-mining phase in hard coal regions, induced micro-seismicity represents a risk for future land use. The EU-PostMinQuake project, funded by the Research Fund for Coal and Steel (RFCS), aims to study the dependency of such events and the rising water table in hard coal basins to detect and manage the risks of post-mining seismicity. This contribution shows the relation between water and seismicity in four former underground hard coal mines located in Czech Republic, France, Germany and Poland.