



The language of induced seismicity: understanding the associated perceptions of seismic terminology.

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Induced seismicity is a subject that is gaining more and more coverage in the public sphere, especially in connection with novel geological technologies such as hydraulic fracturing for oil and gas, carbon capture and storage and enhanced geothermal systems. Increasingly induced seismicity is being cited as a subject of concern for communities who live near these developments, but the language of induced seismicity is not well understood by many non-geoscientists and, as a result, the potential for miscommunication and misunderstanding is high.

As a part of a wider study examining the public's perceptions of a Deep Geothermal power plant development in Cornwall, UK, one particular focus on how different audiences use and interpret the language of induced seismicity has provided new data on the ways that non-expert publics associate certain language with specific impacts. Using an experimental survey based technique with public participants, the associations between perceived and observed impacts from seismic events were measured, for various terms commonly used to describe induced seismicity. These terms, including 'earthquake', 'tremor', 'seismic event', 'microseismic event' and 'induced seismic event', were selected as being frequently used by industrial, academic, governmental and popular media outlets when discussing induced seismicity. The observed relationships between perceived scale of impact and understanding of the terms are useful for those seeking to communicate more effectively about induced seismicity and its associated risks.