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Changing perspectives on resource extraction.

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Over the last century, resource extraction in the UK has changed immeasurably; from relatively small-scale, manually-operated facilities to the larger technological advanced sites that exist today. The communities that live near these sites have also changed, from housing workers that were as much of a resource as the geological material, to local residents who are environmentally literate and strongly value their landscape. Nowadays great pressure is put on the extractive industry to work in both environmentally sustainable and socially ethical ways, but how does this impact upon the local population? How do communities perceive the resource extraction that neighbours them? And is this perception rooted in a general understanding of geology and the subsurface?

To explore resident's perceptions of the geological environment, three villages in the southwest of England have been investigated, using a mixed-methods mental models approach. The villages were selected as each has a different geological setting, both commercially and culturally. The first village has a strong historical geological identity, but little current geological activity. The second village has a large tungsten mine in the process of beginning production. The third village has no obvious cultural or commercial relationships with geology and acts as the control site. A broad sample from each of the three villages was qualitatively interviewed, the results of which were analyzed using an emergent thematic coding scheme. These qualitative results were then modelled using Morgan et al's mental models method (2002) and tested using a quantitative questionnaire.

The results of this mixed method approach reveals the principal perceptions (or mental models) of residents in these three villages. The villages each present a different general perception of resource exploitation, which appears to be culturally driven, with the first village having the most positive correlations. These mental models are important as they indicate the changing perceptions of local residents in relation to both their local geology and human exploitation of geological resources. The implications of this research for developing strategies of engagement with local communities will be discussed.