

# SeisDARE: an open access seismic data repository

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Seismic reflection data (normal incidence and wide-angle) are unique assets for Solid Earth Science. They provide critical information about the physical properties and structure of the lithosphere, and are useful to understand the geometry and evolution of the tectonic plates, and for exploration of natural resources, civil engineering, characterization of seismogenic zones and hazard assessment. The resolution of seismic reflection data is highly appreciated for basic and applied Earth Sciences. However, these datasets are logistically complex and expensive to acquire, and their geographical coverage is limited. In addition, legacy seismic reflection data also have an added value as new information can be retrieved by applying new processing approaches. The preservation and dissemination of seismic open access data is an asset to promote accurate and innovative research. Here, we present the Seismic DATA REpository (SeisDARE), which is, to our knowledge, one of the first comprehensive open access online databases that stores seismic data registered with a permanent digital object identifier (DOI). The datasets included here are accessible online and guarantee the FAIR (Findable, Accessible, Interoperable, Reusable) principles of data management, so that each dataset enters into a statistic referencing database and its impact can be measured. This database has been built thanks to a network of several institutions, promoting a multidisciplinary research, and is open for international data exchange and collaborations. SeisDARE includes deep seismic sounding and high-resolution data acquired in the last three decades in the Iberian Peninsula and Morocco. In addition, as result of fruitful collaborations, we are starting to host data acquired worldwide. Our first incorporation of this kind are seismic profiles recorded in Hardeman County, Texas, within the COCORP project. SeisDARE aims to make easily accessible legacy and recently acquired seismic data and establish a framework for future seismic data management plans. The datasets are available at <https://digital.csic.es/handle/10261/101879>, bringing endless opportunities to the scientific, industrial and educational communities.

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