Spain launches country's largest earthquake network

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Work is underway in Spain to build the country's largest seismic network ever. With a grant of €4.5 million from the Spanish Ministry of Education and Science, the network will comprise a total of 80 stations built 50 kilometres apart, providing simultaneous readings of both superficial and deep current seismic movements in the Iberian Peninsula.

Although the peninsula is only at moderate risk from earthquakes, every 200 years or so earthquakes as big as six on the Richter scale occur. This is because Iberia, once a plate of its own, is squashed between Africa and Eurasia, and is now fused to and part of the latter.

Dubbed the 'Topo-Iberia', the network will provide the 100 researchers involved in the initiative with an unprecedented database with which to better understand the lithosphere and analyse the process and mechanisms that cause earthquakes in the peninsula. The researchers will also be able to compare these readings with data available for Africa.

'Topo-Iberia will conduct innovative research on the topography and spatial as well as temporal evolution (4D) of a natural laboratory, which is the micro-continent formed by the Iberian Peninsula and its borders,' explains González Lodeiro, the coordinator of the initiative.

It is expected that the network will join up with similar research initiatives, such as the TopoEurope and EuroArray projects in Europe, and the ongoing US programme Earthscope.

In addition to the network, researchers from the University of Granada, in collaboration with Italian scientists, are analysing the epicentres of earthquakes that occurred in the past in order to make seismic hazard maps to avoid future damage.

Until now, the exact point where disasters occurred, such as the earthquakes of Alhama in 1884 and Malaga in 1680, were unknown since there were no seismic stations before the beginning 20th century.

Researchers hope that the maps will provide insight into the seismic past of southern Spain, and also help them pinpoint the exact location of the areas that run a high hazard in the future so that great damage can be avoided.

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