

About Tellus

Tellus is a national programme to gather geochemical and geophysical data across the island of Ireland, examining the chemical and physical properties of our soils, rocks and waters. The data will help to inform the management of Ireland's environment and natural resources. Tellus is undertaken by Geological Survey Ireland and is funded by the Department of the Environment, Climate and Communications.

Lead | Pb

Shallow topsoil samples were collected from the northern half of Ireland between 2004 and 2019, as part of the Tellus geochemical survey projects of Geological Survey Ireland and the Geological Survey of Northern Ireland. The map represents almost 17,000 sites covering an area of just over 50,000 km² and incorporates a wide variety of geological domains in Ireland. Samples were collected at a typical density of one sample per 4 km² in Ireland and one sample per 2 km² in Northern Ireland.

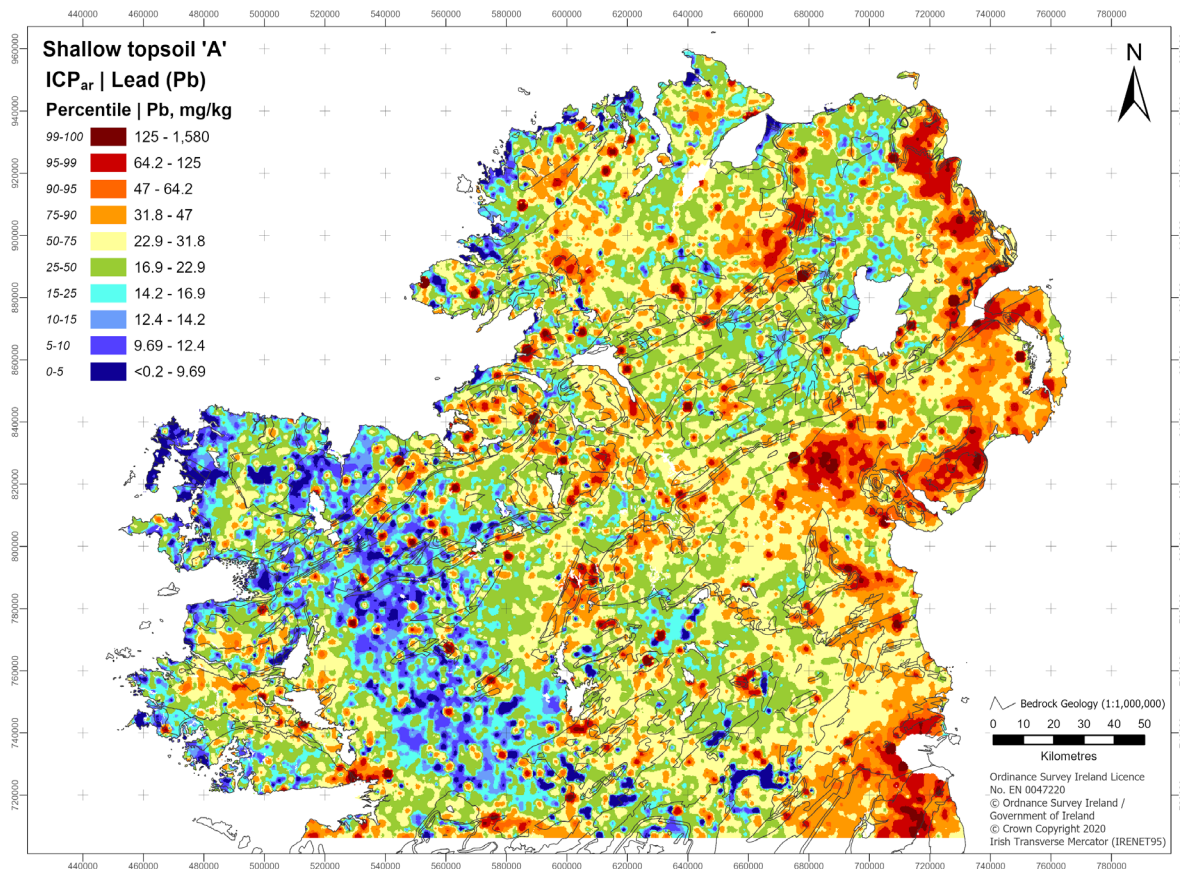
Laboratory analyses comprised soil pH (CaCl₂), loss-on-ignition at 450°C and multi-element partial-extract analyses of major, minor and trace elements by ICP following aqua regia digestion.

The map displays the distribution of measured Lead (Pb) concentrations in shallow topsoil and demonstrates a mixture of bedrock and anthropogenic control on topsoil composition. Topsoil overlying granitic bodies such as the Barnesmore Granite in County Donegal, the Mourne Granite in County Down and the Leinster Granite in counties Dublin and Wicklow has relatively high Pb concentrations, reflecting bedrock composition. High Pb concentrations also characterize soil in the vicinity of known bedrock Pb mineralization, notably in counties Monaghan and Armagh, at Tynagh in County Galway, Conlig-Whitespots in north County Down and throughout the Dalradian succession in Connemara. Strong positive Pb anomalies around Dublin, Belfast and numerous other towns reflect anthropogenic contamination from fuel burning and industry.

Free data & maps at www.gsi.ie/tellus

Geological Survey Ireland is a division of
the Department of the Environment, Climate and Communications

Geochemical Data in Shallow Topsoil Lead | (Pb)



Rialtas na hÉireann
Government of Ireland