

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.

Calcium | Ca

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.

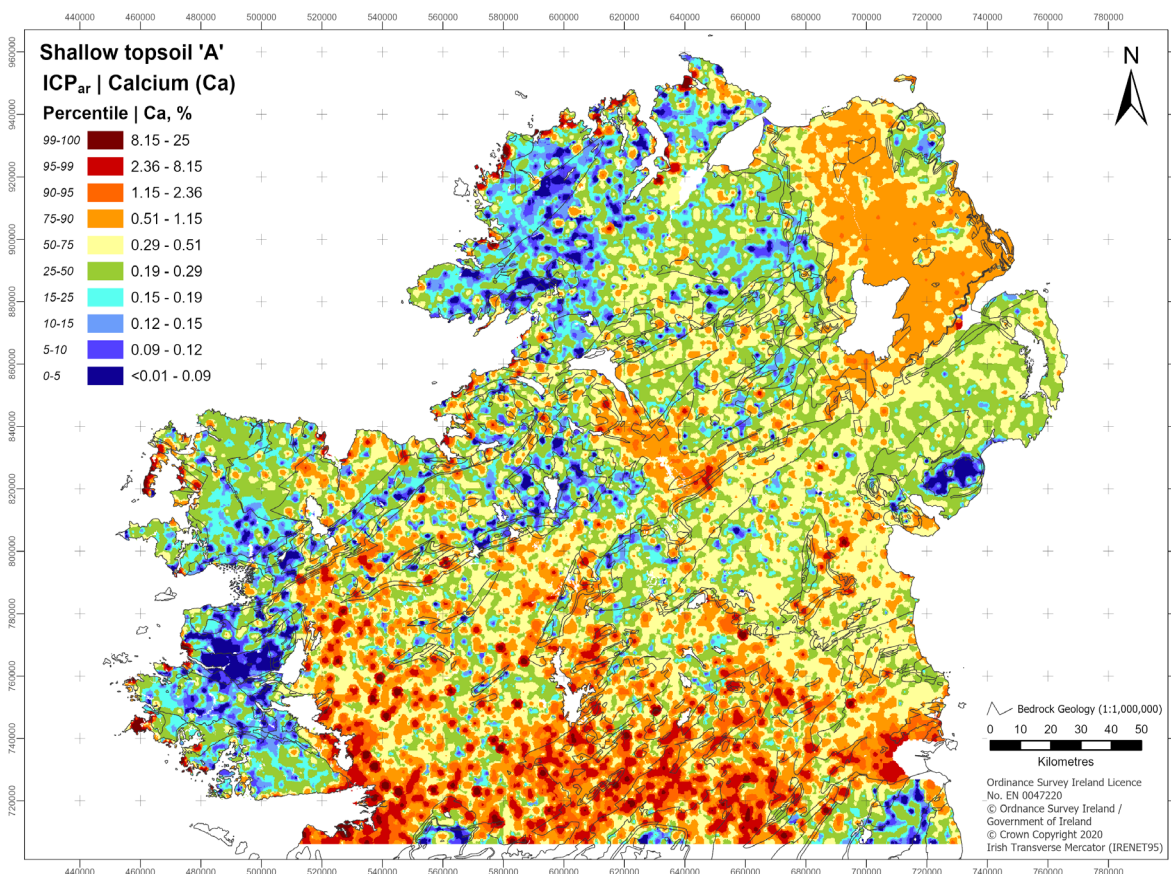
Laboratory analyses comprised soil pH (CaCl₂), loss-on-ignition at 450°C and multi-element partial-extract analyses of major, minor and trace elements by ICP following aqua regia digestion.

The map displays the distribution of measured Calcium (Ca) concentrations in shallow topsoil. Strong bedrock control on soil composition is shown by the relatively high concentrations of Ca observed over the midlands, where limestone is the dominant bedrock, and in the northeast where the soil composition closely reflects the mapped extent of the Ca-rich basalt lavas of the Antrim plateau. Low Ca concentrations are observed in mineral-poor organic soils in upland and peat-covered areas, most notably in counties Galway, Mayo and Donegal but also in the Sperrin Mountains in County Tyrone, the Mourne Mountains in County Down, the uplands around Lough Allen and in the Dublin-Wicklow mountains. Localized high Ca concentrations observed along the northern and western coasts largely reflect the presence of *machairs*, coastal sand plains rich in sea-shell fragments.

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 Calcium | (Ca)



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