

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.

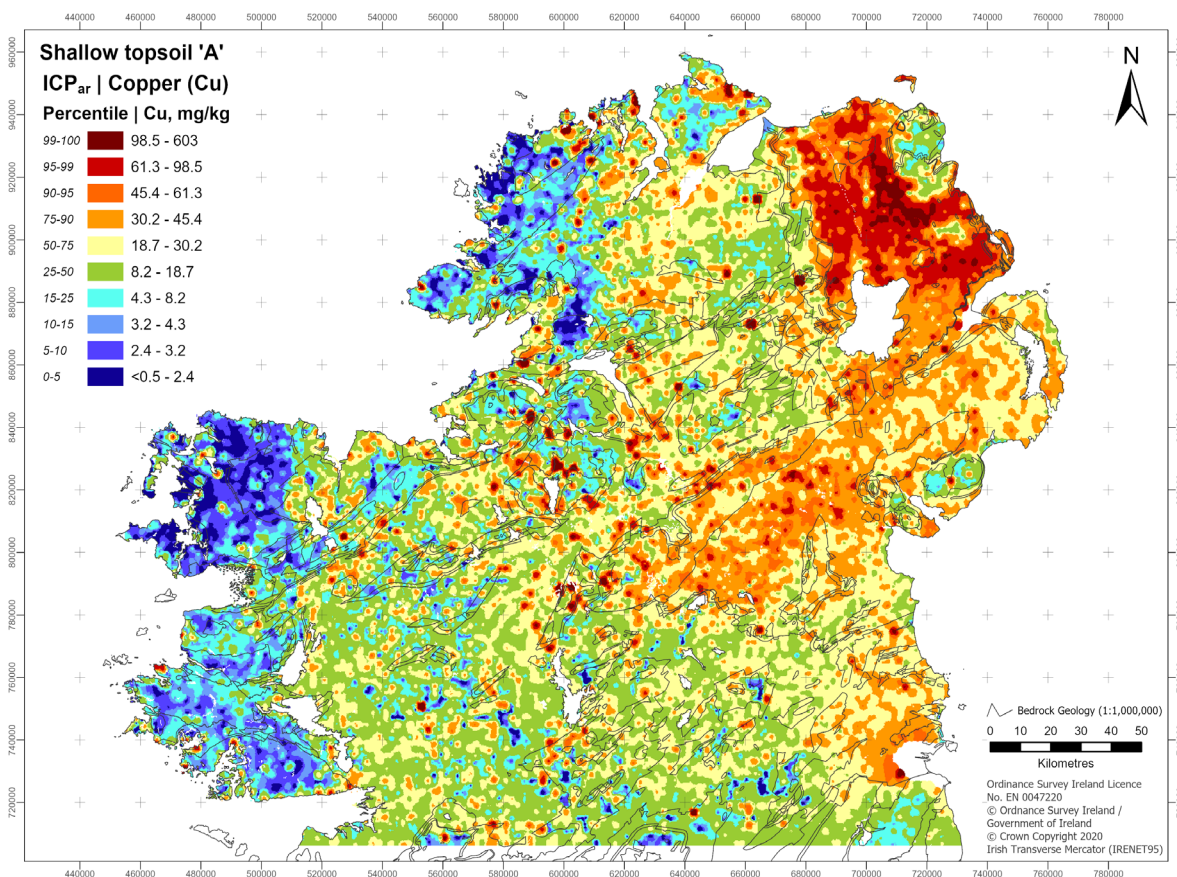
Copper | Cu

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 Copper (Cu) concentrations in shallow topsoil. A considerable degree of bedrock control on soil composition is demonstrated by the relatively high Cu concentrations observed over the Antrim basalts, the greywackes of the Longford-Down inlier and around known mineralization, such as the zinc-lead deposit in Tynagh, County Galway, and numerous minor zinc-lead deposits in counties Monaghan and Armagh. Mineral-poor organic soils in upland and peat-covered areas have relatively low Cu concentrations. Copper is widely dispersed in the environment in part because of agricultural use, such as the application of manure, fungicides and herbicides. Thus the distribution of Cu on the map is somewhat "spotty", with numerous scattered small or point-source anomalies apparently reflecting anthropogenic sources.

Geochemical Data in Shallow Topsoil Copper | (Cu)



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

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



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