

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.

Arsenic | As

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.

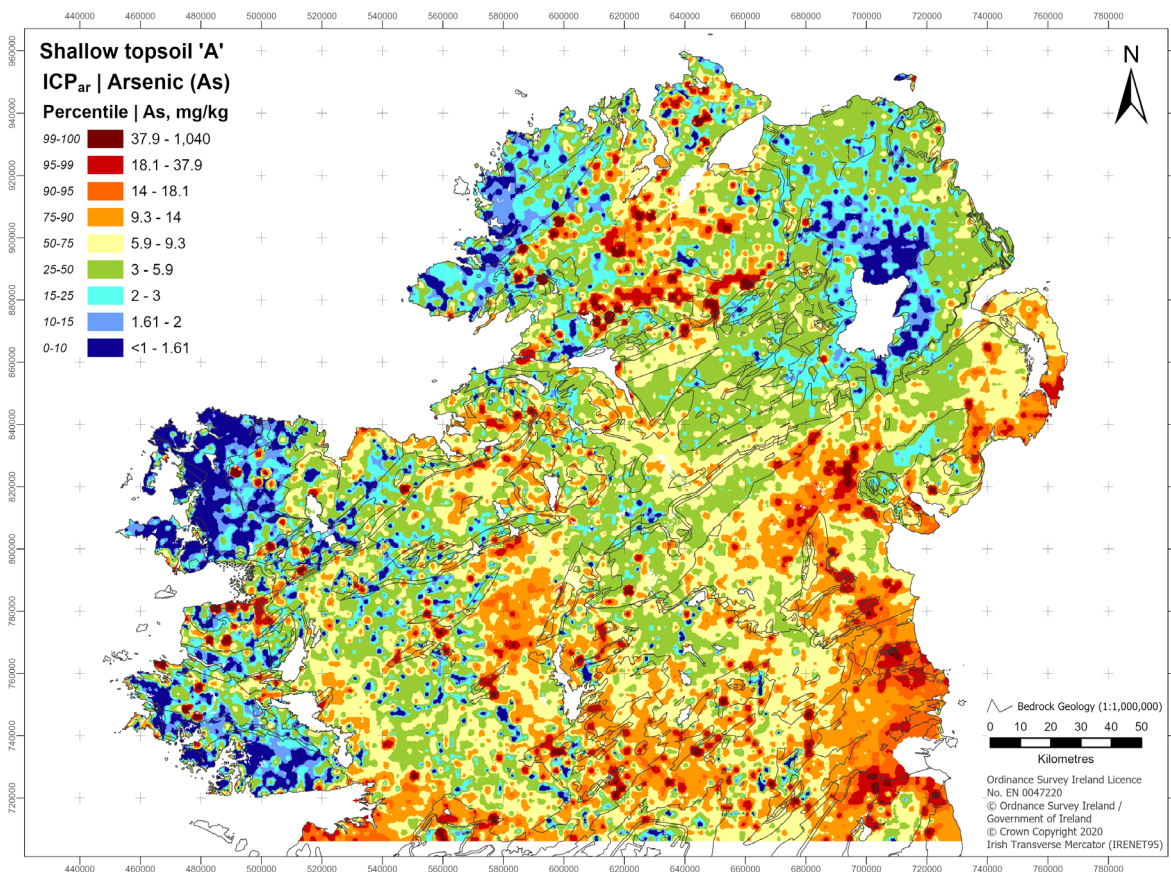
Laboratory analyses comprised soil pH (CaCl₂), loss-on-ignition at 450°C and multi-element partial-extract analyses of major, minor and trace elements by ICP following aqua regia digestion.

The map displays the distribution of measured arsenic (As) concentrations in shallow topsoil, which reflects both bedrock composition and the presence of peat or peat-rich soils. Low As concentrations are observed in soils over limestone bedrock, the Antrim Basalts and in mineral-poor organic soils in peat-covered areas, notably in Connemara and counties Mayo and Donegal. High As concentrations are associated with areas of known bedrock gold mineralization in the Sperrin Mountains in County Tyrone, Inishowen in County Donegal, Clontibret in County Monaghan and Croagh Patrick in County Mayo. Zinc-lead mineralization in counties Monaghan and Armagh and at Tynagh in County Galway is also associated with high As concentrations in topsoil. Relatively high As concentrations in soils in Louth, Meath and Dublin may reflect the relative abundance of shale bedrock in these counties.

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 Arsenic | (As)



Rialtas na hÉireann
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