

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.

Mercury | Hg

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.

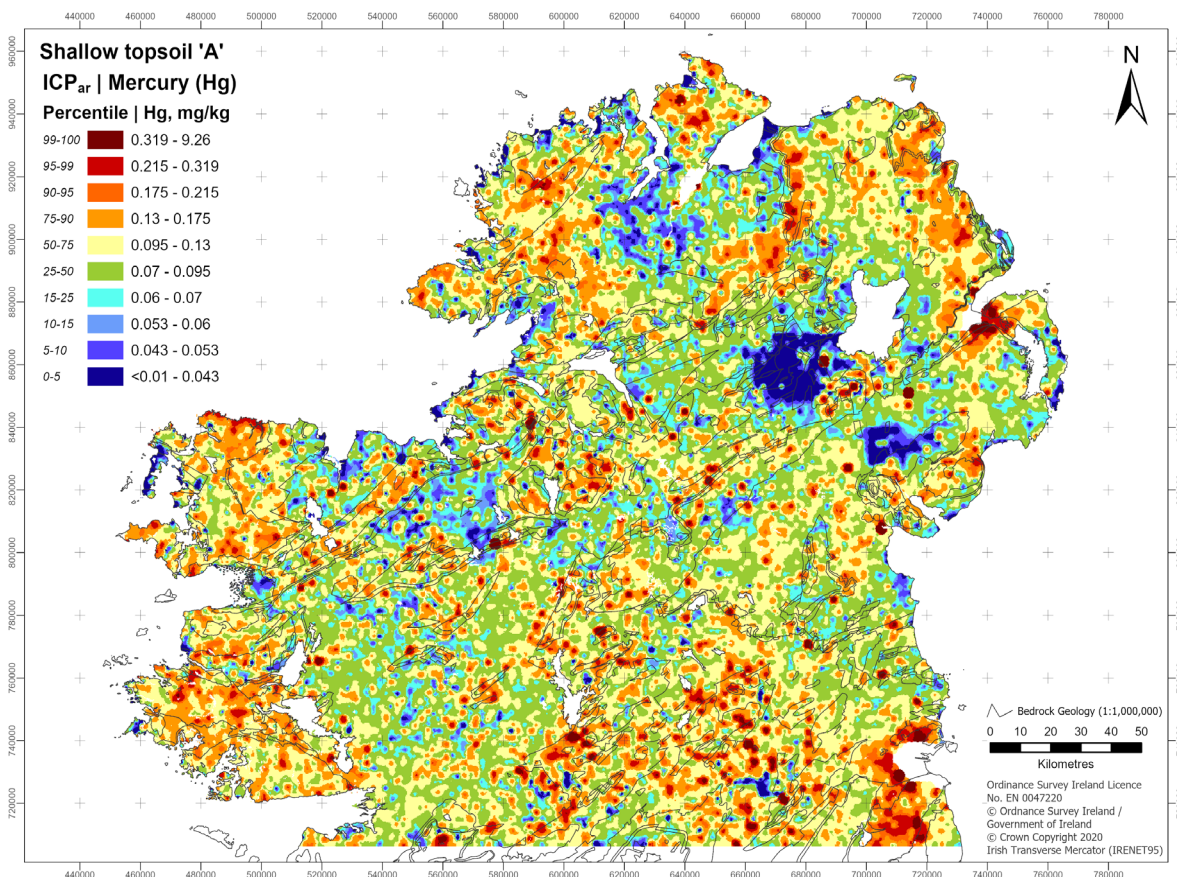
Laboratory analyses comprised soil pH (CaCl₂), loss-on-ignition at 450°C and multi-element partial-extract analyses of major, minor and trace elements by ICP following aqua regia digestion.

The map displays the distribution of measured Mercury (Hg) concentrations in shallow topsoil. Mercury is a rare metal in rocks and soils but is widespread in the environment, having been introduced, *inter alia*, by coal burning, manufacturing and the application of pesticides. The accumulation of Hg in soil is controlled by organic complexes and sulphur. Thus, in contrast to many other elements analysed for Tellus, there is little clear evidence for bedrock control on Hg concentrations in topsoil. Mineral-poor organic soils in upland and peat-covered areas have relatively high Hg concentrations, reflecting its association with organic complexes. Relatively high concentrations observed around Belfast, Dublin and many towns and villages across the country appear to reflect anthropogenic contamination from coal-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 Mercury | (Hg)



Rialtas na hÉireann
Government of Ireland