

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.

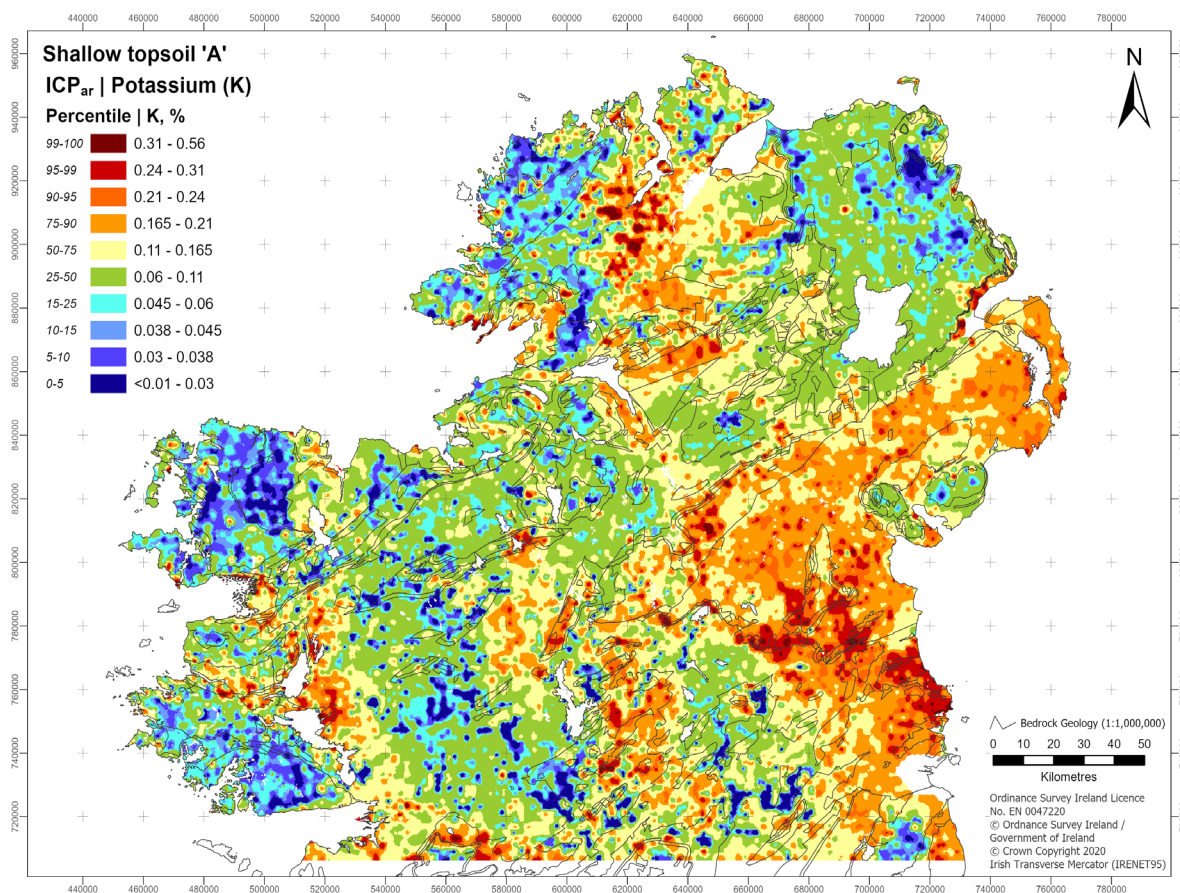
Potassium | K

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 potassium (K) concentrations in shallow topsoil. In general, the observed distribution of K in topsoil reflects the chemical and/or mineralogical composition of the bedrock. Relatively high K concentrations characterize soils overlying the Dalradian schists in east Donegal as well as the Longford-Down inlier greywackes in counties Cavan, Monaghan, Louth, Armagh and Down. In contrast, topsoils over granitic rocks, such as those in counties Wicklow, Galway, Donegal and Down, generally have relatively low K concentrations, reflecting both the occurrence of mineral-poor organic soils in these upland areas and the fact that K is typically hosted in granite by feldspar, which dissolves poorly in *aqua regia*. Low K concentrations are also observed in soils in many areas underlain by limestone bedrock.

Geochemical Data in Shallow Topsoil Potassium | (K)



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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