

Current environmental baseline and trends for soil - NORTHERN IRELAND

Sub-topic	Current environmental baseline	Trends
Soil quality	<ul style="list-style-type: none"> • A major problem in farmland is the over-accumulation of phosphorus in the soil, due to agricultural fertilisers. • Northern Ireland has no soils meeting the criteria for the highest Agri-food and Biosciences Institute Agricultural Land Classification. • 31% of soils in Northern Ireland meet the criteria for classes 2 – 3A of the Agri-food and Biosciences Institute Agricultural Land Classification. This represents the best and most versatile soil resource in Northern Ireland. 	<ul style="list-style-type: none"> • Information not readily available in national publications such as state of the environment or soil quality reports.
Soil contamination	<ul style="list-style-type: none"> • 12,000 sites have been used for a purpose which could potentially have caused contamination. 	<ul style="list-style-type: none"> • Information not readily available in national publications such as state of the environment or soil quality reports.
Soil sealing/ loss	<ul style="list-style-type: none"> • The main pressures for land-use and land-take in Northern Ireland are development (including housing, industrial and recreational), infrastructure, mineral extraction industries, and tourism. 	<ul style="list-style-type: none"> • Information not readily available in national publications such as state of the environment or soil quality reports.
Soil erosion	<ul style="list-style-type: none"> • Approximately 57% of land-cover in Northern Ireland is grass for agricultural usage. • A combination of agricultural intensification and expansion of urban areas in Northern Ireland have contributed to a reduction in diversity of vegetation cover, leading to an increase in soil erosion. • Construction sites, road and rail building schemes have been identified as sources of soil erosion (e.g. as a result of de-vegetation and from soil storage bunds). • Erosion and plough damage can cause damage to cultural remains and degrade the layers of soil for artefacts. Soil erosion on cultivated mineral soil is generally a localised event confined to a small area. 	<ul style="list-style-type: none"> • Various policies are explicitly directed at minimising soil erosion e.g. Good Agricultural and Environmental Condition. • Best management practices have been implemented for forestry to mitigate the effects of land management through the Forests & Soils Guidelines 1998. • Forecasted eco-tourism expansion in Northern Ireland may lead to increased erosion, particularly on footpaths and access routes to monuments etc.
Soil degradation structural & compaction	<ul style="list-style-type: none"> • Information not readily available in national publications such as state of the environment or soil quality reports. 	<ul style="list-style-type: none"> • Information not readily available in national publications such as state of the environment or soil quality reports.

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Soil organic matter	<ul style="list-style-type: none"> Over three quarters of raised bogs in Northern Ireland have been cut for fuel at some time; exposing organic matter to air, causing oxidation and loss of soil organic matter. Soil biodiversity remains largely unknown in the UK. Loss of soil organic matter can impact the cultural significance of soil, through loss of past land management activities and reduced stabilising effects which protect archaeological remains. 	<ul style="list-style-type: none"> There has been little change in soil carbon stock between 1939 (385.9Mt) and 2000 (385.43Mt). In recent years, the rate of carbon loss appears to have increased partly through greater suburbanisation. Most raised bogs in Northern Ireland are now designated Sites of Special Scientific Interest (SSSI)/ Areas of Special Scientific Interest (ASSI's).

Sources:

NIEA (formerly EHS), 2008. 'Our Environment, Our Heritage, Our Future'- Northern Ireland, State of the Environment.

Tomlinson R.W. and Milne R.M. (2005) Soil Carbon Stocks and Land Cover in Northern Ireland from 1939 to 2000.

Notes:

Further information can be obtained from data produced by the Tellus project which carried out high density soil sampling (2km² grid) (funded by the Department of Enterprise, Trade & Investment).