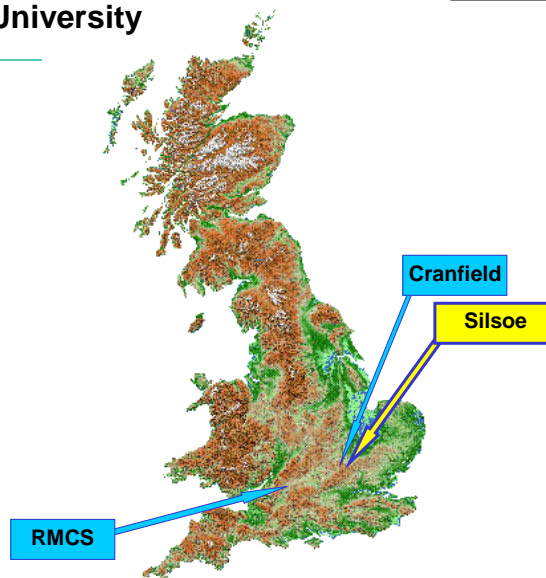


## Soil-Net.com

A soils educational resource

**Dr Stephen Hallett**  
Principal Research Scientist  
NSRI, Cranfield University  
[s.hallett@cranfield.ac.uk](mailto:s.hallett@cranfield.ac.uk)

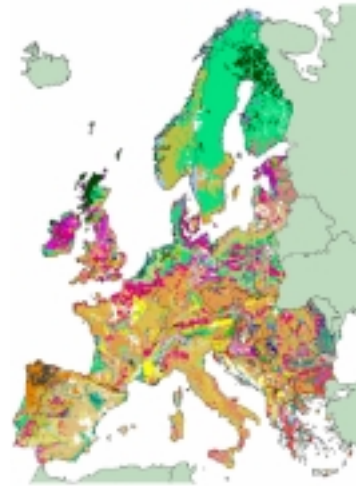
## Cranfield University



## National Soil Resources Institute

The National Soil Resources Institute provides research, **teaching, training** and **consultancy** in all aspects of the sustainable management of land and soil resources. It is the UK's **National Reference Centre** for Soil.

National and international focus of activity



[www.cranfield.ac.uk/nsri/](http://www.cranfield.ac.uk/nsri/)

## Activities

- **RAISING AWARENESS**  
of soil issues to land managers, policymakers & the general public
- **EDUCATING**  
current and future practitioners
- **RESEARCHING**  
aspects of soil and land systems and their management
- **MONITORING and SURVEYING**  
land and soil resources
- **ADVISING ON and UNDERTAKING**  
land and soil management
- **FORMING PARTNERSHIPS**  
with other organisations with similar objectives



## Soil Drivers

### ➤ **EU Communication: Towards a Thematic Strategy for Soil Protection**

We are now placing soil protection on a level with cleaning up our water and air. For too long, we have taken soil for granted. However, soil erosion, the decline in soil quality and the sealing of soil are major problems across the EU. This is a sustainability issue given that these trends are largely irreversible and that soil is vital for our livelihood.

### ➤ **UK Environment Agency: The State of Soils in England and Wales**

Healthy soils are vital to a sustainable environment, but there are increasing signs that their condition has been neglected. As it cannot be assumed that soil loss and damage will be recoverable, it is essential that soils are managed sustainably to keep them healthy for future generations.

### ➤ **UK DEFRA: The First Soil Action Plan for England**

Soil is one of the essentials of life, along with air and water. Yet it is so much a part of everyday life that there's a danger of taking it for granted. Covering most of the earth's land surface, it is the essential growing medium for our food, timber and other crops. It supports the buildings that we live and work in and the roads and rails that move us around.



## Soil Functions

### ➤ **Support of ecological habitat and biodiversity**

habitat and gene reserve

### ➤ **Food and fibre production**

growing medium for food, fibre, timber, energy, forage crops

### ➤ **Environmental interaction**

filter between air and geology, stores water and carbon

### ➤ **Providing a platform**

building and engineering foundations, influences landuse

### ➤ **Providing raw materials**

minerals, peat, topsoil, brick clay

### ➤ **Protecting cultural heritage**

archaeological and cultural remains



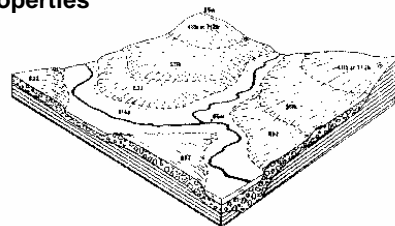
## Soil Threats

- Erosion
- Decline in soil organic matter
- Soil contamination (local and diffuse)
- Soil sealing
- Soil compaction
- Decline in biodiversity
- Salinisation
- Floods and landslides



## Where's the Soil ??? KS2/3/4

- **Geography**
  - geographical enquiry and skills
  - environmental change and sustainable development
- **Science: life processes and living things**
  - variation, classification and inheritance
  - green plants as organisms
  - living things in their environment
- **Science: materials and their properties**
  - acids and bases
  - geological changes





## Where's the Soil ??? KS2/3/4

### ➤ History

- events, people and changes in the past
- historical interpretation



Soil-Net.COM

An Educational Resource for Information on Soil Science

Please Choose a Page

Soil for Schools

Advanced Soils

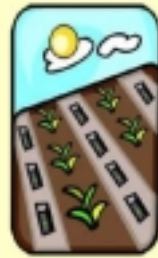
WISDAS World Soil Survey Catalogue and Archive

# Soil for Schools


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[What is Soil?](#)
[Soils of the World](#)
[Soil Functions](#)
[Preserving Soils](#)
[Soil and Health](#)
[Activities](#)

## Welcome to the site!

Here you will find information and several fun activities to help you learn about one the world's most precious resources - soil.



## Main Topics:



**What is Soil** - looks at the basic elements and structure of soil.



**Soils of the World** - provides an insight into the diverse types of soil worldwide.



**Soil Functions** - illustrates some of the vital functions and uses of soil.



**Preserving Soils** - highlights some of the main threats facing soil today, and the ways these are addressed.

# SOILS: ADVANCED

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[What is Soil?](#)
[Soil Formation](#)
[Soil Profile](#)
[Soil Types](#)
[Soil Mapping](#)
[Soil Functions](#)
[Preserving Soils](#)


## Welcome to Soils: Advanced

This site is intended for individuals seeking a comprehensive introduction to the living element of soil, one of the world's most important natural resources. Within the site, you will find a range of informative articles relating to the subject, including the formation and structure of soil, its importance in relation to environment and the economy, and additionally some the main problems and threats facing soils today.

Find out about concerns such as soil erosion and climate change, and the measures that can be taken to deal with them.



Learn about the essential environmental functions of soil, as well as some of the typical ways in which soil is used.

Discover the incredible range and diversity of the micro- and meso-beasts living within soil.



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World Soil Survey Archive and Catalogue

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The WOSSAC project has the support of the British Society of Soil Science and the Tropical Agriculture Association, and is led by Cranfield University's National Soil Resources Institute [\(NSRI\)](#)

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**Welcome to WOSSAC**

The WOSSAC Project aims to develop an Archive and Catalogue of all substantial soil surveys made by British companies and staff around the world, with a view to ensuring their enduring availability and protection.

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# WOSSAC

World Soil Survey Archive and Catalogue

Item	Title	Date	Country	Keywords
<a href="#">41</a>	Explanatory Notes on the Geological Map of Kilimanjaro (Covering Quarter degree Sheets 42, 56 and 57)	1965	Tanzania	Soil Survey
<a href="#">61</a>	Soils of the Makuranga Basin, Tanzania	1977	Tanzania	Soil Surveys, Land Use
<a href="#">62</a>	A Survey of Soils in the Kongwa and Machingwa Districts of Tanganyika	1957	Tanganyika	Soil Survey
<a href="#">126</a>	Arusi Miresome A soil reconnaissance journey through parts of Tanganyika territory December 1935 to February 1936	1947	Tanganyika	Soil Survey
<a href="#">175</a>	Exploratory soil map and agro-climatic zone map of Kenya, 1960 Exploratory Soil Survey Report No. E1, Kenya Soil Survey, Nairobi, 1962	1959	Tanganyika	Soil Survey, Land Utilization, Agriculture
<a href="#">202</a>	A survey of the soils and land use potential of the Southern and Eastern slopes of Mt. Kilimanjaro, Tanzania	1970	Tanzania	Soil Survey
<a href="#">260</a>	Tanzania Atlas Map	1967	Tanzania	Soil Survey, Land Potential
<a href="#">269</a>	Flat copies of Soil and Land use Potential Maps of Tanzania	1967	Tanzania	Soil Survey
<a href="#">278</a>	Flat copies of Soil and Land Use Potential Maps of Tanzania	1967	Tanzania	Soil Survey
<a href="#">315</a>	A reconnaissance Soil Map of the Mikera Area	1962	Tanzania	Soil Survey
<a href="#">342</a>	Soil factors affecting the distribution of the grassland types and the utilization by wild animals on the Serengeti plain, Tanganyika	1965	Tanganyika	Soil Surveys

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WOSSAC Item ID:	62
UDC Class:	631.474:631.111 (578)
Title:	Soils of the Maharanga Basin, Tanzania
Language:	English
Subjects:	Soil Surveys, Land Use
Publication Date:	1977
Publisher's Name:	Haring Technical Services Ltd
Place of Publication:	Borehamwood, Herts, UK
Project Sponsor:	H.V.A. International BV, Amsterdam (Holland)
Material Extent:	75p Report, 57p Appendix, 2 Inserts (A3)
Material Characteristics:	Typewritten report with tables, figures
Material Accompanying:	None
Material Type:	Ring bound
Summary Abstract:	As part of a feasibility study of irrigated sugar cane, the Maharanga Basin (8,800 ha) was surveyed. The survey focused on land suitability, not classification.
Country Then:	Tanzania
Country Now:	Tanzania
Region:	Maharanga Basin
Access Terms:	By enquiry

Report an error or correction in this item's data

## Mud, Mud - Glorious Mud !

The Soil-Net.com Project

- **Secure funding for project development**
- **Establish Soils Special Interest Group – Brainstorm!**
- **Establish Curriculum Steering Group**
- **Establish Technical Development Group**
- **Develop materials and resources**
  - **text, illustrations, interactive ICT, resource packs**
- **Ongoing trials with local schools**
- **Launch to (un)-suspecting world**

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