

Use of Profile Probes saves time and money for EU funded FutMon forest monitoring team

FutMon project

Delta-T Profile Probes have been installed at four sites across the U.K. to provide soil moisture data as part of [FutMon](#), an EU Life+ project. The aim of FutMon is to create a Europe-wide long term forest monitoring system. The FutMon partner organisation in the UK is Forest Research (Centre for Forestry and Climate Change). The data required for FutMon are being collected at existing UK long term forest monitoring plots, established by Forest Research in 1994.

Soil moisture profiling in forest research

At each site, a single Delta-T Profile Probe (connected to a Delta-T Data Logger) is used to carry out continuous monitoring of soil moisture down to a depth of 40 cms. Once a month, when the site is visited to collect data, the Profile Probe is removed from its access tube and connected to a handheld readout meter. In this mode it is used to make instant readings at four nearby measurement points, each with its own access tube installed.

After the measurements have been made, the Profile Probe is simply repositioned in its original access tube and reconnected to the DL6 Logger, ready for another month of unattended recording. The advantage for Forest Research is being able to use a single Profile Probe for continuous monitoring as well as for checking spatial variability. It minimises the cost of equipping each site, it means fewer cables and it reduces security risks. Forest Research use short Profile Probes (40 cm) for their shallow soils, but long Probes (100 cm) are also available.

Centre for Forestry and Climate Change

The Centre is based at Alice Holt, Farnham, Surrey and carries out research into the effects of environmental and climate change on forestry, and how the sector can play its part in adaptation and mitigation of climate change. The Head of Centre is Dr Andy Moffat.



Profile Probes and DL6 Loggers at Forest Health Monitoring Plots

Forest Research uses a DL6 Data Logger to log the PR2/4 Profile Probe at each site. The PR2 measures moisture



content at depths of 10, 20, 30 and 40 cm which the DL6 logs every 12 hours. The DL6 has a dedicated IP67 socket for the PR2 cable which makes connection and disconnection very easy. The DL6 is waterproof (IP67) but to improve security at the monitoring plots, Forest Research conceal the logger in a camouflaged container buried just below ground level.

More about the FutMon Project

FutMon is an important EU Life+ project that brings together 38 research institutes spread across 24 European countries and has a total budget of 34 million Euros. The overall aim is to create a pan-European long term forest monitoring system to:

- Inform policy making
- Provide data on climate change, air pollution, biodiversity, and forest condition to meet other research needs
- Provide data to support sustainable forest management
- Analyse data on forest soil conditions in relation to air pollution, climate change, carbon sequestration and biodiversity