



Understanding the soil underfoot: building a national postgraduate soils cohort through participative learning

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Many of the PhD students starting Soil Science PhDs have only a limited understanding of the wider importance of soils, the state-of-art in other sub disciplines, and have often never seen a soil profile in the field. As the number of students nationally in the UK is also small compared to some other disciplines there is also a need to build a cohort of early career researchers.

To address these issues, Lancaster University and the James Hutton Institute together with support from the British Society of Soil Science and the Natural Environment Research Council (NERC), ran a 5 day residential foundation soil science 'Summer School' in March 2015.

The training school was an intense programme for ambitious and energetic post-graduate students. The course was specifically designed for students who were keen to develop skills in the development of interdisciplinary research ideas and proposals. Specifically the course addressed:

- the different functions in land uses and across landscapes
- novel approaches for investigating how soils function
- the basics of making a soil description and soil sampling in the field;
- the current key challenges in soil science research
- the requirements of, and approaches to, soil science research that requires multi-disciplinary and interdisciplinary approaches
- the essentials of developing and planning a research project

Our approach was to provide a space for the students to both learn from, but also work with some of the leading UK Soil Science experts. We used workshop style lectures, including some delivered via the internet, combined with student research teams working alongside research mentors to produce research proposals to be 'pitched' to a panel at the end of the course. These proposals formed the focus for engagement with the 'experts' making the time the students spent with them concentrated and productive.

Feedback from the students was excellent and a variant of the course will be repeated by Cranfield University in 2015.