

Dealing with Data

Obtaining, creating and analysing data for postgraduate research

SCOPE

Landscape ecology is the study of interactions, across space and time, between the structure and function of physical, biological and cultural components of landscapes. The importance of a landscape-scale approach is recognised by conservation practitioners on the ground, right up to policy makers at the Governmental level. Science and research is an integral part of this chain, helping to guide effective management and conservation at the practical level and for future legislation and policy.

This workshop will provide an opportunity for those engaged in research at MSc & PhD level to explore the types of data which are available to them, and to be introduced to a range of statistical techniques commonly used when analysing landscape, cultural and ecological data.

OBTAINING DATA FOR RESEARCH

There are a huge variety of data sources available to students, many of which are open source or readily available under license at no extra cost. This includes spatial data for use in Geographic Information Systems (GIS), species and biodiversity data and cultural and heritage information.

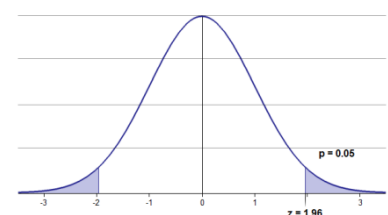


Photographer: James Allan

In addition to existing sources, there is scope to collect real-time data in the field; a method which can provide vast amounts of biologically accurate and representative information. The use of field data is often used in addition to secondary sources to validate trends found.

ANALYSING DATA

The scientific nature of landscape ecology means that the use of statistical techniques to analyse findings are often required. Numerous software packages and countless statistical tests and methods are available to suit all types of data, yet it can be confusing to know which are best to use.



THE WORKSHOP

The workshop will be run on 13th and 14th May 2013 at the University of Reading. It is designed for any postgraduate students who are currently involved in, or who are planning to start scientific research which requires the input and analysis of data.

While the focus will be on landscape ecology, a wide range of data resources and statistical methods will be explored, many of which are directly applicable to those studying in the fields of ecology, biological sciences, geography, environmental science or similar.

The workshop will be highly interactive and run to the needs of participants. Prior to the start, all students attending will be asked to fill out a short form detailing their research and what they would like to get out of the workshop i.e. specific focus on a statistical method, or guidance on obtaining data for their work. This will allow the guest speakers to tailor their sessions to the needs of the group.

PROGRAMME:

DAY 1: Obtaining secondary data

An introduction to online resources including the National Biodiversity Network, CEH Landcover Map, Ordnance Survey, Natural England, English Heritage and CASweb.

This session will include information on open-source data, obtaining licences and use of the data in GIS. There will also be a group discussion looking into the statistical issues that we should consider when using secondary data.

DAY 1: Collecting primary data in the field

A look at different sampling techniques, 'experimental design' and a discussion into the advantages and drawbacks of using field data. There will be opportunity to engage in some fieldwork such as bird ringing, vegetation survey, or butterfly and insect sampling. The exact choice will be governed by participant interest and weather on the day.



Ringling a nuthatch and sampling butterflies with nets
Photographer: Jess Neumann



DAY 2: Analysis of data

The part of research least favoured by many students! We will take a look at popular techniques used in landscape ecology including multivariate analysis and ordination using software packages such as **R** and **Canoco**. This session will be strongly driven by the requests of the participants with opportunity to seek answers and advice for your own research.

DETAILS

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| Date: | 13 th and 14 th May 2013 |
| Location: | University of Reading |
| Fee*: | £30 (ialeUK members) £80 (non-members) |

*Includes: Course, tea & coffee, 2x lunch, 1x dinner.

It is possible to apply for funding to help with travel & accommodation costs at <http://iale.org.uk/students>

Registration: To register your interest, find out more, or book a place please email Jess Neumann at students@iale.org.uk

