

Main aims of workshop

To build the ability to build studies which incorporate the use of spatial approaches in ecology studies

Key background and justification for the workshop

"GIS skills are essential to modern day ecologists. No matter what their specialism ecologists have had to acknowledge that species, and ecological phenomena occur in the real world, and that the relationships exist between environmental factors and other species can only be properly understood by acknowledging the spatial relationships and therefore by using GIS techniques.

Species distribution modeling techniques also represent powerful and popular tools to extrapolate from the known records of a species distribution to predict the potential distribution of a species under various conditions, and better understand factors underlying these distributions.

The workshop aims to:

- A) train students in fundamental GIS tools and techniques using a number of different available software programs;
- B) teach students how to design and implement studies that utilize GIS techniques, and avoid potentially confounding biases;
- C) discuss the use of predictive modeling techniques to spatially project species distributions, using various approaches.
- D) use predictive approaches to project species distributions under changing conditions and:
- E) use various approaches and spatial statistics to interpret and analyse the results. Further information on the course schedule and structure is available at the base of this document).

During each part of the workshop students will be asked to reflect on how the approaches can directly be used in their own studies, and the final ½ day of the workshop will be available for students to start working with their own data so they have something they can continue to work on following the workshop.

All students will receive a digital booklet compiled for the course that provides explanations for all tasks, background theoretical material and suggested further reading.

Students are also encouraged to bring their own data-sets as there will be the opportunity to start developing their own research using the techniques covered (and any others of interest) in the final afternoon of the four day workshop, or too extend this on for a final two days for advanced students with data.

By the end of the workshops all participants should have the skills to develop and competently use GIS and species distribution modeling techniques in their own research.

Each evening during the workshop students can choose to attend a GIS Clinic: and go through their own study with the instructor on a one to one basis, to design, develop and analyze their own studies-further work on this will also occur on the final day of the workshop, but these appointments will enable students to advance their work further in the final day."