



Teaching landscape development and environmental change: A case study from the Wicklow Mountains, Ireland

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This poster illustrates what we believe to be an effective approach in teaching landscape development and environmental change in the field. We present a case study from a second year undergraduate residential field course based in the Wicklow Mountains (Ireland). The overall aim of the field course is to support the 2nd year undergraduate teaching programme and provide the students with practical research skills to give them the training they need to undertake their independent dissertation research projects. Whilst the individual field days focus on testing specific research questions through application of key research skills (e.g. surveying and mapping, sediment coring, sediment properties etc) we also place an emphasis on understanding broader issues of landscape development and environmental change. This is something that is increasingly problematic to achieve in undergraduate courses due to the reduced amount of field teaching in many undergraduate geography curricula. On this field course we have developed three of the six field days within the Liffey River basin so that in addition to the specific research hypotheses tested on the individual field days, the students can make links between the three sites to gain a broader understanding of environmental change in the region. The main aims of the three sites are:

- 1) To investigate soil development and variability through the study of post-glacial soils formed on contrasting lithologies and aspects: a) an eroded granite bedrock hillside and b) a fluvio-glacial valley fill terrace characterised by a limestone lithology;
- 2) To investigate peat development and degradation in the Wicklow mountains in the upper reaches of the Liffey River through stratigraphic coring transects;
- 3) To investigate environmental change on a section of Holocene floodplain, inset within the fluvio-glacial terrace of site 1), through stratigraphic coring transects and the palaeohydrology of an abandoned meander.

These three linked sites enable the students to investigate broader themes in relation, for example, to the magnitude of landscape change in response to glacial/inter-glacial processes; and the geomorphological response of river basins to Holocene environmental change, in particular the response of the River Liffey to Late Holocene peat degradation. This poster will present an overview of the three sites, aims and activities and will illustrate how we can maximise limited teaching time in the field to improve student understanding of landscape and environmental change.