



## Issues of combining social and physical science methodologies

Louise Bracken (1) and Elizabeth Oughton (2)

(1) University of Durham, Geography, Durham, United Kingdom (l.j.bracken@durham.ac.uk), (2) Centre for Rural Economy, School of Agriculture, Food and Rural Development, Newcastle University, UK, NE1 7RU

Many aspects of disciplinary ways of working have been reported as barriers to effective interdisciplinary working. These include; different knowledge practices (Evans and Marvin 2006); language and communication (Bracken and Oughton 2006); and institutional relationships (Lowe and Phillipson 2009). Research has also noted that interdisciplinary projects are messy since they bring together multiple meanings and interpretations of complex issues (Donaldson et al 2010) and that the ability to frame and continually reframe ongoing research is essential for the success of interdisciplinary projects (Oughton and Bracken 2009). One issue not discussed in the literature so far is how to collect primary data around environmental problems that is acceptable to both social and natural science working practices. We have found this to be a repeated difficulty. This includes the issue of how to demonstrate quality and rigour in methods, data collection and interpretation to those from other disciplinary trainings. In this paper we draw on two ESRC (RELU) funded interdisciplinary projects to illustrate how this issue has played out in practice. The first is a project on Angling where an intended piece of research conducted around river banks and the interaction between anglers, ecology and geomorphology was never undertaken because of differences in approaches to data collection which could never be resolved. The second is a project on flood management where we are investigating the use of evidence in decision making. Again differences in interpretations of objectives and methods used have needed to be resolved from differ disciplinary perspectives to enable the project to proceed and develop. One key difference between social and physical scientists seems to be the sampling approach. Physical scientists tend to want to develop a representative sample for primary data collected which is then analysed to develop and promote the 'truth' about the study site. This 'truth' is then often applied to other locations. In contrast social scientists aim to gather primary data to represent the range of views around an issue and hence excel at reflecting the diversity of opinion/beliefs. In this way social scientists are less willing (and happy) to develop one 'truth' and the data itself does not lend itself to this.