

**RES-224-25-0003, Prof L Heathwaite, University of Sheffield**

**01 Aug 04 – 12 June 05**

**A Cross-Disciplinary Methodology to Promote an Holistic understanding of Diffuse Pollution Issues in Rural Environments**

Diffuse pollution has some distinctive properties, setting it aside from other types of pollution. The causes of diffuse pollution are both temporally and spatially distributed and patterned and the sources are often minor when considered individually, but are significant when combined. These properties make sources of diffuse pollution difficult to identify and control. Diffuse pollution is an economically important problem, with DEFRA estimating the cost of tackling the currently known aspects of diffuse pollution at around £300 million. Further to this, reductions in diffuse pollution must be central to compliance with the Water Framework Directive, and to the Public Service Agreement to bring 95% of SSSIs into 'favourable' status by 2010.

The project sought to develop a methodology for social and natural scientists to work together on 'diffuse' agri-environmental challenges. The team had four key objectives:

- To examine the different ways in which natural and social scientists might understand the concept of diffuse pollution.
- To bring together these different concepts to find common ground in the research needs of social and natural scientists to produce a more holistic understanding of the diffuse pollution problem in rural environments.
- To learn from international expertise in developing interdisciplinary approaches to tackling diffuse pollution.
- To learn from stakeholder experience in order to understand how they might contribute to, and benefit from, improved understanding and consensus decision-making with regard to diffuse pollution.

To understand the causes of diffuse problems the research team moved outside traditional disciplinary boundaries in order to understand the social and environmental dynamics of those causes. The project involved four workshops that sought to tackle different elements critical to an understanding of diffuse pollution. The workshops involved academics, end users and, for two of the workshops, stakeholders from the local communities in which the workshops were held. Each workshop was sponsored by a key end user with concerns or responsibilities with regard to diffuse pollution. Four themes were explored: The groundwater dimensions to the diffuse pollution issue: challenges for interdisciplinary research (sponsored by the Environment Agency in conjunction with the EU Intereg-IIIb project Water4All); Delivering a better rural environment: challenges for interdisciplinary research on diffuse pollution issues in upland catchments (sponsored by DEFRA); Challenges for interdisciplinary research on diffuse pollution issues in lowland agricultural catchments exhibiting eutrophication (sponsored by RSPB); and Delivering a better rural environment: challenges for interdisciplinary research on diffuse pollution issues (sponsored by UNESCO).

The outcome of this series of workshops is that science, both social and natural, must be brought into the public consciousness for the best management practices to be effective. Bringing science to the community allows the public to become familiar with the issues and prevents them becoming detached from the consequences of diffuse pollution and disappointed in the results of scientific studies.