

# **PhD studentship: Risks to groundwater supplies of drinking water from pesticides**

***Catchment Science Centre, University of Sheffield***

## ***A NERC Industrial CASE Studentship with Yorkshire Water***

The Catchment Science Centre invites applications for this fully funded studentship to commence in autumn 2006. It will be supervised by Prof David Lerner ([http://www.shef.ac.uk/gprg/people/lerner\\_d.html](http://www.shef.ac.uk/gprg/people/lerner_d.html)), Dr Steve Thornton ([http://www.shef.ac.uk/gprg/people/thornton\\_s.html](http://www.shef.ac.uk/gprg/people/thornton_s.html)), and Matilda Beatty of Yorkshire Water (<http://www.yorkshirewater.com/>).

A significant proportion (~20%) of Yorkshire Water's supplies is drawn from groundwater and pesticides have been observed in some samples of raw water. The overall research aim of the project is to provide scientific data to help quantify the risks to drinking water supplies from pesticide pollution of groundwater. The research objectives are to assess the occurrence of pesticides in groundwater, estimate biodegradation and sorption parameters, and examine the hypothesis that there are critical source areas for pesticide entry to groundwater.

There will be two principal research components, namely laboratory experimentation to establish fate and transport behaviour of selected pesticides, and field mapping of potential critical sources areas in a selected catchment. In addition, the student will spend some time at Yorkshire Water, reviewing data on pesticide occurrence and understanding the water supply business.

The project will be based in the new the Catchment Science Centre (CSC; [www.shef.ac.uk/csc](http://www.shef.ac.uk/csc)), established jointly by the University of Sheffield and the UK Environment Agency. The CSC is a multi-disciplinary collaboration across the Environment Division at Sheffield. The Centre is co-directed by David Lerner (Sheffield) and Bob Harris (Head of Ecosystem Science at the Environment Agency). It currently employs two research fellows, has 6 current PhD students, and funding for 7 more students. The CSC overlaps with the Groundwater Protection and Restoration Group (GPRG), a world-class groundwater research group ([www.shef.ac.uk/gprg](http://www.shef.ac.uk/gprg)). A substantial part of GPRG's research is on biodegradation or organic pollutants, with field, lab and modelling projects.

You must be eligible for a NERC studentship ([www.nerc.ac.uk/students/eligible/](http://www.nerc.ac.uk/students/eligible/)) and be able to take up the studentship during 2006. Many academic backgrounds would be suitable including microbiology, chemistry, geology, environmental science, environmental or chemical engineering. Numeracy and practical lab skills would be very useful attributes, but we are mostly looking for intellectual ability and enthusiasm.

Please see [www.shef.ac.uk/csc](http://www.shef.ac.uk/csc) for further details and the application process. Potential applicants are welcome to contact David Lerner, [d.n.lerner@shef.ac.uk](mailto:d.n.lerner@shef.ac.uk) with informal enquiries. There will be a rolling closing date (23<sup>rd</sup> Mar, 23<sup>rd</sup> Apr, etc) until the studentship is filled.