



The  
University  
Of  
Sheffield.

Groundwater  
Protection &  
Research  
Group.



# A Short Course in Catchment Management

Monday 22 – Tuesday 23 June 2009  
At the University of Sheffield

## The Context and Issues

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The implementation of the **Water Framework Directive** (WFD) in Europe will usher in a new approach to environmental management. Sustainability requires a balance to be found between the competing demands made of freshwater, recognising that streams, rivers, lakes and groundwater require sufficient water of good quality if they are to continue to provide essential ecosystem services.

Achieving sustainability will involve fundamental changes in the fields of river management and the supporting research. As we move towards the vision of river catchments as integrated social-ecological systems that are inter-connected, the implications of management interventions in any one area will need to be considered more holistically. This change will require different ways of thinking, managing and responding to those which have been in vogue over the past 20 years. A stronger emphasis on science to support a more transparent decision-making process will be needed as well as a more participatory, adaptive management approach.

This two-day course introduces delegates to **Integrated Catchment Management** (ICM) in the context of the Water Framework Directive and the River Basin Planning system. Delegates will analyse some of the key challenges facing river basin management and gain insights into some of the tools that can be used in developing solutions and help in decision-making.

## Why you should do this course!

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At the end of the two days delegates will have a firm grasp of the major challenges of the WFD, the major issues and the changes facing all stakeholders. They will be able to understand the extent to which current scientific knowledge and the available tools can help them in decision-making and addressing uncertainties. Delegates will address their organisation's role in a future ICM approach and gain insights as to what the implementation of the WFD may mean for their organisation or business.

Course facilitators and presenters have strong connections into the background and current implementation of the WFD and are at the cutting edge of the developing science in the UK and Europe.

## Who should attend

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Anyone who wants to learn a little more about the WFD and how it may develop in the medium to longer term, particularly technical and managerial staff from: local, regional and national policy makers and environment regulators, civil and engineering consultancies, key stakeholder groups such as water companies, British Waterways, trade associations, NGOs such as RSPB, National Trust and Rivers Trusts, and postgraduate students wanting a jump-start on the subject area.

## Course Outline

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### Monday 22 June

- Integrated Catchment Management – the setting for a new approach to adaptive environmental management
- The current legislative setting - the background to the Water Framework Directive and a review of the River Basin Planning process in UK and Europe
- Case Studies in Integrated Catchment Management from around the world

### Tuesday 23 June

- The critical issues and the science behind them ( 1) pressures on the system
  - Pollution pressures
  - Hydromorphological pressures
  - Urban pressures
  - Rural pressures
- The critical issues and how to address them ( 2) management challenges
  - Existing and new science
  - Understanding and valuing ecosystem goods and services
  - A risk-based approach to catchment management
  - Monitoring and modelling; the available and developing toolkit
- Future directions

## MSc training in Contaminant Hydrogeology and the Environmental Management of urban land and water

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Our short courses all form part of our taught MSc programme. Each module is taught in a three week block, making intermittent study easy if you wish to take a degree part-time. So if you are thinking about doing more than one short course as continuing professional development, why not sign up for an MSc (12 modules and dissertation), Diploma (12 modules) or Certificate (6 modules)? These courses have been approved by the Institution of Civil Engineers for accreditation leading to Chartered Engineer status.

Our courses benefit from significant industry input, in both delivery of module content and development of collaborative projects for student dissertations. Course instructors include UK and international experts from academic and industry backgrounds. The courses have been designed to combine theoretical, technical and practical aspects to give you the best preparation for a rewarding career.

You can find further information on all our modules and MSc options on our website [www.sheffield.ac.uk/civil/pg/](http://www.sheffield.ac.uk/civil/pg/) or you can contact Nicky Nash for MSc enquiries only on 0114 222 5711.

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## About the lecturers

**Bob Harris** is Professor in Catchment Science and Strategy Director of the Catchment Science Centre at the University of Sheffield, having spent 35 years working in the UK water and environment sectors within government agencies at all levels (local, regional, national and international). His work leading a research programme at the Environment Agency helped underpin the development of new approaches and policies relating to the Water Framework Directive, through an integrated catchment science approach. Bob remains active internationally in collaborative projects and policy/science networks, EU FP6/7 projects and with UNESCO's HELP Programme. He was awarded the Geological Society's Whitaker Medal for "outstanding services to hydrogeology" in 2007.

Other presenters will be drawn from the Catchment Science Centre ([www.shef.ac.uk/csc](http://www.shef.ac.uk/csc)) and its collaborators.

### The Catchment Science Centre (CSC)

The CSC aims to conduct novel science to underpin the sustainable management of catchments to deliver good ecological quality in surface waters. It is a collaborative research initiative, established jointly by The University of Sheffield and the Environment Agency in 2004 and draws on expertise from across multiple academic departments at Sheffield, having strong links with national and international academic and non-academic partners. The CSC is a key element in the delivery of the Environment Agency's Integrated Catchment Science programme.

## Booking form

### *A Short Course in Catchment Management*

The University of Sheffield

Monday 22 June – Tuesday 23 June 2009

Name

Job title

Organisation

Address

Telephone

Fax

Email

I would like a place on this course  
**Fee £450**

I would like a list of accommodation

I would like further information on  
the MSc training programme

*Continued overleaf.....*

I enclose a cheque made payable to the University of Sheffield (\* preferred option)

I would like to be invoiced at the address below

I would like to pay by credit card: Number on card

Date of expiry

Security no

Name on card

Signature on card

I have the following special requirements (eg vegetarian, mobility problems)

Signed

Date

## Fees and booking

The fee for each course is £450 for the two days, inclusive of course notes, lunches, and refreshments. Single day registration is possible for £295. A list of bed and breakfast accommodation in hotels or guesthouses can be provided if needed. Contact Pat Rayner if you have any enquiries.

Please complete the booking form in the leaflet, and return to

Pat Rayner  
The University of Sheffield  
Department of Civil and Structural Engineering  
University of Sheffield  
Mappin Street  
Sheffield S1 3JD  
Tel: 0114 222 5758  
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You can find further information on all our modules and MSc options on our website [www.sheffield.ac.uk/civil/pg/](http://www.sheffield.ac.uk/civil/pg/)





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