

# **A CIWEM Conference**

## ***Integrating Land-use and Water in Practice***

### **Linking Surface and Groundwaters Developing Priorities and Long-term vision**

**November 10th, 2004**

**SOAS, London**

**Colin Fenn**

Managing Director, HR Wallingford

**Andrew Gunning**

Director, Ewan Associates

**Glenn Watts**

Water Resources Strategic Planning Manager, Environment Agency

***Sponsors***

**Ewan Associates**

**Environment Agency**

**Environmental Simulations International Ltd**

**RSPB**

**UK Groundwater Forum**

This event is accredited for **Continuing Professional Development** under the CIWEM CPD Scheme

Organised by **CMS - Coastal Management for Sustainability**

**Integrating Land-use and Water in Practice**  
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## **Introduction**

The traditional way we have viewed water management – in compartmental boxes – has tended to fly in the face of our basic understanding of the water cycle and its linkage with how we manage the land. Principles like **sustainability and ecosystem approach** are forcing us to both *think* and act in a more integrated and holistic way. The **Water Framework Directive**, with its emphasis on healthy aquatic ecosystems as a measure of a healthy overall environment, is providing a new legislative driver forcing us to take a more integrated view than hitherto. Of considerable concern, however, is the growing evidence of a range of closely inter-related issues that are going to be both highly damaging and very expensive to resolve unless action is taken in a timely way. Unless we understand the systems and processes that influence the levels, the flows and the pollutant fluxes that influence the aquatic ecosystem, we will not be able to manage the land effectively to address the major pressures, such as diffuse pollution and unsustainable abstraction. The meeting will deliberately take a holistic view of this problem but place the **importance of groundwaters** centre stage, rather than where they have been unacknowledged and undervalued.

The conference is timely. Government is currently consulting on catchment sensitive farming with particular regard to the issues of diffuse pollution from nutrients. A listing of some of the key factors shows how many of the aspects are linked: land use and fertilisers, CAP reform, diffuse pollution (who pays?), eutrophication of surface waters, biodiversity threats from degraded SSSI rivers, and long-term contamination of groundwaters, health risk, treatment costs, long-term investment by the water companies, water pricing, Periodic review etc. The solutions need to be joined-up (over Government and sectors) and consistent over time.

The **aim** of this event is to highlight the challenges we face, the integrated nature of that challenge and then the question of whether this response is adequate to meet the threats. This meeting will look to provide perspectives and lessons covering a number of important issues which will include:

- What scientific understanding is still required to enable an integrated approach - land-use, surface and groundwaters – to be adopted? What must we know about the way the system compartments interact? What techniques and technologies do we need to employ / invest in? Can we change from treating the water at the receptor (the tap) to managing the source? Will we have to do both, and for how long? Who pays?
- The current state of groundwaters. A recent study by UKWIR and work on the Water Framework Directive characterisation process has produced worrying appraisals of the state of and risks to groundwaters; this is all the more worrying given the long-term issues relating to this contamination.
- What can past experience of approaches to controlling diffuse pollution teach us about future requirements to reduce the risks posed to soil and groundwater quality by current land-use practices?
- Over-exploitation of groundwaters and their quality is also leading to damaging effects to the biodiversity of terrestrial habitats and wetlands many of which are part of nationally designated series
- What more do we need to do to explore ways of protecting groundwaters not least by managing land use sympathetically. Various work such as the Water4All project demonstrates that radical land use change and more robust protection criteria can play a key part in protecting groundwater and surface water – what are the socio-economic implications of such land management ?
- The long-term costs, the financial and other implications of not managing groundwater resources effectively are being better understood; studies to be reported at this conference will show serious cost implications to both water companies and society
- The practical implications for the water industry of increasing pollution of groundwaters, the decreasing availability of blending options, and the inability to dispose of saline effluents from treatment processes etc is one that will have enormous consequence for water supply.
- Lastly, the adequacy of policy, legislative and regulatory response will be explored. The Water Framework Directive, the daughter Groundwater Directive, and domestic legislation can provide important regulatory mechanisms but will we implement them effectively in order that they are effective tools? How can we combine harder legislative controls with softer mechanisms?

The objectives of the conference will be to:

- Provide evidence of the threats, to water quality and the linkage between soils, groundwater and surface waters, and to highlight what scientific knowledge is lacking to develop an integrated approach.
- Identify the priorities for research, management and policy
- Make the link to investment in the water and farming industries in order to explore the long-term vision needed to address this suite of issues in a timely fashion.

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**Programme**

09.00 Registration and Coffee

**Session 1 Chairman Glenn Watts** CIWEM & Environment Agency

09.45 **Welcome to the Conference on behalf of CIWEM** **Glenn Watts**

9.50 **Integrating our view of land-use, surface and groundwaters – facing the challenges for science and management** **Bob Harris** Environment Agency

10.15 **Risks and trends in groundwater quality** **John Chilton & Dave Kinniburgh**  
British Geological Survey

10.40 **Making the links – groundwaters-surface waters and habitats – a biodiversity perspective on water quality and resource issues** **Rob Cunningham** RSPB

11.05 **Farming, nitrates, and designations – what have we learnt from the last 30 years** **Kevin Hiscock** UEA

11.30 Conference announcements

11.35 Buffet and refreshments

*Session 2 Chairman: Andrew Gunning, Ewan Associates*

12.20 **Water4All – European scale experience of integrated approaches to land-use, surface and groundwaters** **Kevin Hiscock, Andrew Lovett** UEA and European speaker to be announced

12.45 **Bearing the cost: the economic & resource implications of degrading groundwater quality** **Denis Peach, Marianne Stuart & Panchali Guha** British Geological Survey

13.10 **Contaminated groundwaters - The Water Company perspective – working through of the worst case scenarios** *Speakers to be announced*

13.35 **The policy, legislative & regulatory climate – is it up to the task?** **Jacob Tompkins**, Water UK

14.00 **Developing priorities and long term vision**

14.15 Sweet and refreshments

**Session 3 Chairman: Colin Fenn**, Managing Director, HR Wallingford  
& Chairman of the CIWEM Water Resources Panel

15.00 **Discussion: Developing priorities and long term vision**

16.00 Close – refreshments

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The Chartered Institution of Water and Environmental Management (CIWEM) is the leading professional and qualifying body for those who are responsible for the stewardship of environmental assets. The Institution provides independent comment, within a multidisciplinary framework, on the wide range of issues related to water and environmental management and sustainable development.

**The Venue:** The venue is the School of Oriental & African Studies (SOAS), Russell Square, London. This is a new, air conditioned lecture theatre, with all the modern AV aids and professional projectionists.

**Accommodation:** There is a wide range of accommodation available in the area and delegates will receive a hotel list when they book; this is also available on the CMS website [www.coastms.co.uk](http://www.coastms.co.uk)

**The Organisers:** The conference is being organised by Bob Earll of Coastal Management for Sustainability (CMS) on behalf of CIWEM.

**Conference fee:**

Fee	Fee: £155	VAT: £27.12	£182.12
NGO, Charity, Academic rate	Fee: £ 95	VAT: £16.62	£111.62
Student rate [See below]:	Fee: £ 40	VAT: £ 7.00	£ 47.00
Group rates: Contact CMS 01531 890415.			

- The fee includes food and refreshments and the conference papers
- Delegates with special needs should make this clear on booking
- All non-CIWEM-member conference delegates will receive CIWEM Environmental Partner grade membership to the end of December 2005. They will also receive free copies of our magazine and have the opportunity to be involved in local CIWEM events and activities. For more information, contact [membership@ciwem.com](mailto:membership@ciwem.com), or see [www.ciwem.com](http://www.ciwem.com).

**Conditions:**

- Cheques should be made payable to '**CMS**'.
- **They should be sent to CMS, Candle Cottage, Kempley, Glos GL18 2BU.**
- BACS & Credit cards cannot be accepted.
- **Invoices can be provided** on request.
- Confirmation of registration and receipts will be forwarded on payment.
- Payment should be completed **BEFORE** the event; otherwise entry may be refused
- No refunds will be made for cancellation less than ten working days before the meeting.

Further details from Bob Earll: Phone / Fax: 01531 890415. Joining details – maps, directions and hotels – programme are on the CMS website: [www.coastms.co.uk](http://www.coastms.co.uk) or Email [bob.earll@coastms.co.uk](mailto:bob.earll@coastms.co.uk)

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