



# Groundwater's role in reducing our carbon footprint

**26 May 2010, Austin Court, Birmingham**

*UK Groundwater Forum funded by British Geological Survey, Environment Agency, United Utilities,  
Northern Ireland Environment Agency, Geological Survey of Ireland  
& supported by Thames Water, Veolia Water, University of Birmingham, Entec, Zenith International*

Conference  
sponsored by:



**In-Situ Inc.**

**aquaterra**

Water and Environment

**waterra**

Groundwater equipment for professionals

## History of the Forum

- Strategic Study of Groundwater Issues and Research Needs in the UK - report published June 1995
- Forum promoted a coordinated approach to groundwater research and provided a focus for the identification and prioritisation of research issues
- June 2003, it was decided that the Forum would be more effective if it limited its focus to raising the awareness of groundwater





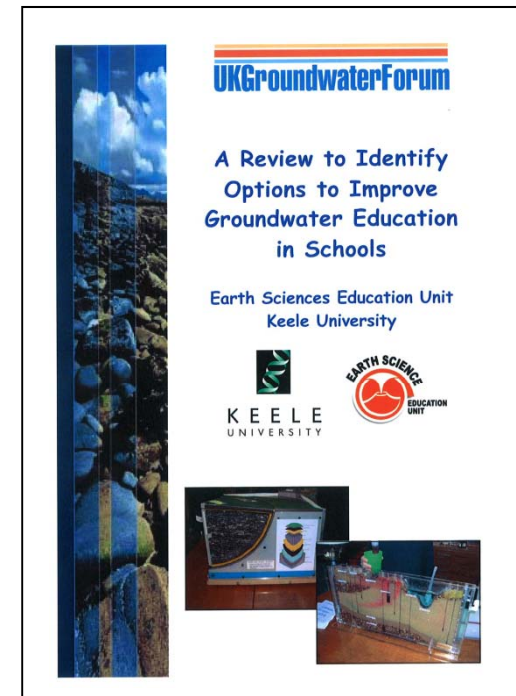
## Forum Conferences

- Aquifer Storage Recovery, Nottingham 1997
- Risk Assessment and Management, London 1997
- Upland Groundwater, Edinburgh 1997
- Low Flows and Wetlands, London 1998
- Groundwater in Tomorrow's Europe, Donnington 1999
- Groundwater Protection in Ireland, Enniskillen 1999
- The Water Framework Directive and Groundwater in the UK, Solihull 2002
- UK Groundwater Forum Stakeholder Meeting, London 2003
- Groundwater and the Directives, Solihull 2004
- Planning for Sustainable Groundwater Resources, London 2006
- Climate Change: the Future for Groundwater Management, London 2007
- Groundwater Resources Planning: the Next 25 Years, London 2008
- Groundwater : a 2020 vision *Challenges for the Future*, London 2009



## Forum Activities

- Advice to DETR on Definition of Good Groundwater Status
- Review of availability of candidates for groundwater-related jobs in the UK
- Review to identify options to improve groundwater education in Schools
- Support for Groundwater Festival
- Articles in the press on groundwater



## Forum Products

- Groundwater: Our Hidden Asset
- Illustrations from the book
- How Rivers Work: the Role of Groundwater
- Forum web site
  - *Basic groundwater info*
  - *Groundwater in education*
  - *Career information*
  - *Forum products*
  - *Meetings & Events*
  - *Groundwater issues*
  - *Groundwater news*



# UK Groundwater Forum

## The Evolving Strategic Context



- **Change**
- **Stresses on the Earth and its resources**
- **Informing decision-making in the 21st century**





## Challenges for Society

- Energy security – CCS, radwaste, clean coal, biofuels, wind, geothermal etc
- Water and food security
- Environmental change impacts, mitigation and adaptation



**Some emerging areas driven by energy security where an understanding of groundwater systems will be crucial**

- Carbon storage
- Deep geothermal energy
- Ground source heat pumps
- Urban water
- Energy crops
- Costs of abstraction





## Morning session

09:30-10:00	Registration, tea & coffee
10:00-10:15	<b>Introduction</b> <i>Denis Peach, British Geological Survey/Chair of Groundwater Forum Steering Committee</i>
10:15-10:40	<b>An overview of the energy industry in the UK and Europe</b> <i>Jeff Hardy, UK Energy Research Centre</i>
10:40-11:05	<b>Energy Crops: implications for the UK's groundwater resources</b> <i>Jon Finch, Centre for Ecology and Hydrology</i>
11:05-11:30	Morning tea and coffee
11:30-11:55	<b>Deep geothermal energy and groundwater in the UK</b> <i>Jon Busby, British Geological Survey</i>
11:55-12:20	<b>Use of shallow geothermal energy (GSHPs)</b> <i>Richard Shennan, Mott Macdonald Fulcrum</i>
12:20-12:45	<b>Groundwater linked options for reducing urban water and energy costs</b> <i>Rae Mackay, University of Birmingham</i>
12:45-13:00	Discussion
13:00-14:00	LUNCH



## Afternoon session

14:00-14:25	<b>CO2 storage in saline aquifers</b> <i>Dan Smith, British Geological Survey</i>
14:25-14:50	<b>Savings from pump selection and installation</b> <i>Darren Hewerdine, Veolia Water</i>
14:50-15:15	Afternoon tea & coffee
15:15-15:40	<b>Managing opportunities for energy in the groundwater environment</b> <i>Anna Hall, Environment Agency</i>
15:40-16:05	<b>Summing up: the challenges in taking advantage of the opportunities that groundwater provides</b> <i>Phil Hayes, Entec</i>
16:05-16:20	Discussion
16:20-16:30	<b>Concluding remarks</b> <i>Rob Sage, Veolia Water</i>