#### 2009 Groundwater Forum Conference

# Changing groundwater priorities over the past 15 years

**Andrew Skinner** 

Formerly, Chair of the UK Groundwater Forum Formerly, Director at the Environment Agency

### Overview

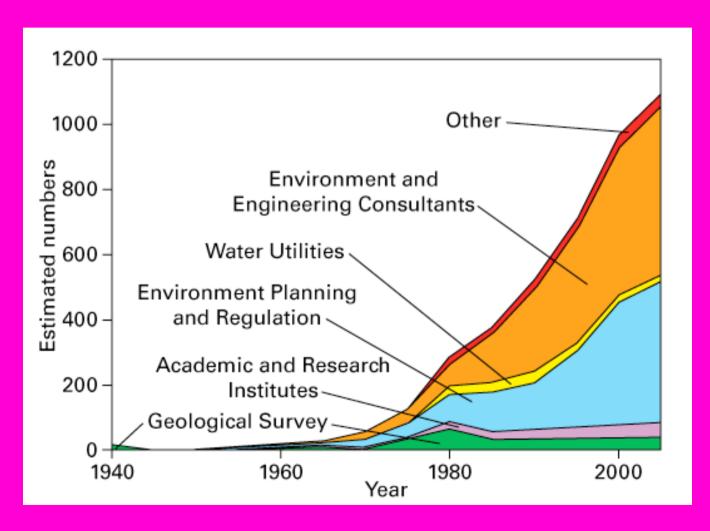
- A personal view of changes in groundwater perspectives since the mid 1990s
- Set in a longer term context
- From the perspective of science, policy, profession and public awareness
- Forward look

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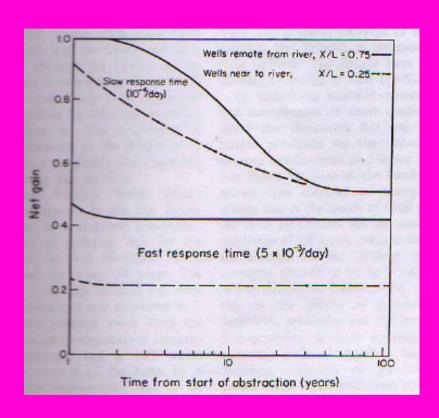
### Groundwater specialists 1940-2005



For details and assumptions see Skinner (2008) or www.groundwateruk.org/html/issues10.htm

### Conjunctive Use of Groundwater

The big idea of the 1970s



Oakes and Wilkinson (1972)

Major focus of hydrogeological work in the 1970s

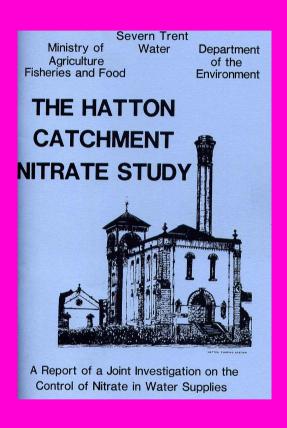
Few schemes survive in their intended form, especially in the Chalk where aquifer characteristics are often not favourable.

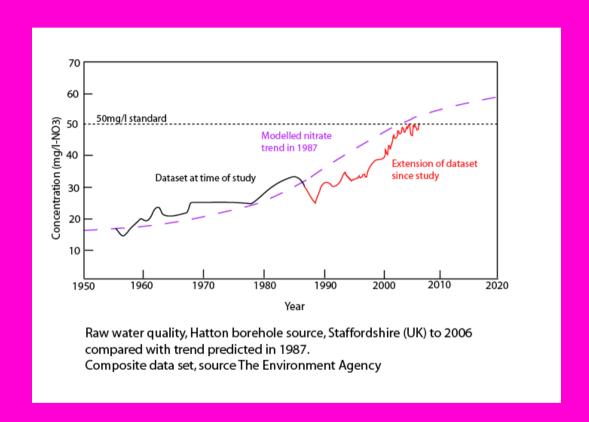
Two major schemes continue, both Permo-Trias; Shropshire Groundwater and the Lancashire Conjunctive Use Scheme (Fylde aquifer)

Is it time for consideration of the the better use of storage through conjunctive management and ASR to be reviewed?

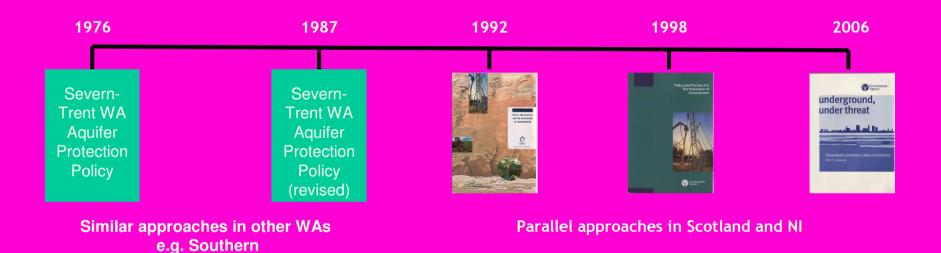
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# Lost opportunity!



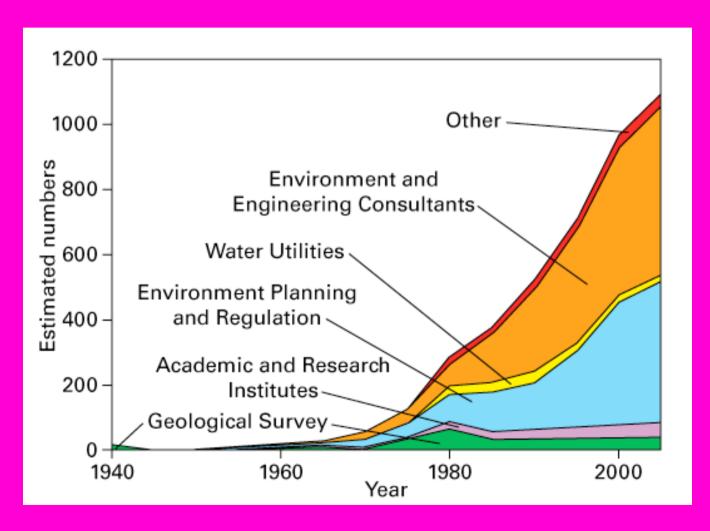


### 30 years of Groundwater Protection Policies



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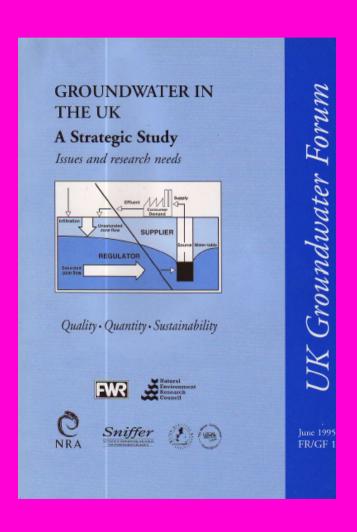
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Now	2009	First river basin plans - whither groundwater?

### 1995 Groundwater Strategic Study



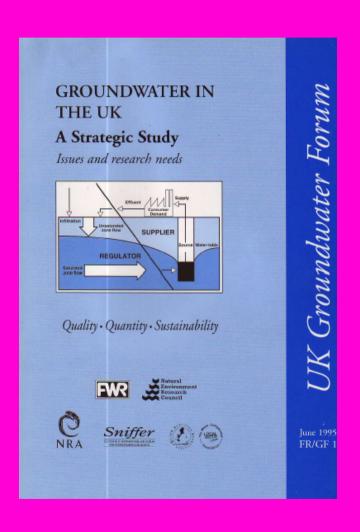
Driven by a concern about fragmentation of research effort and lack of policy understanding

UK wide stakeholder input

Proposed a national groundwater research agenda

Recommended the continuation of the Forum to promote dialogue on and wider understanding of groundwater

### 1995 Groundwater Strategic Study

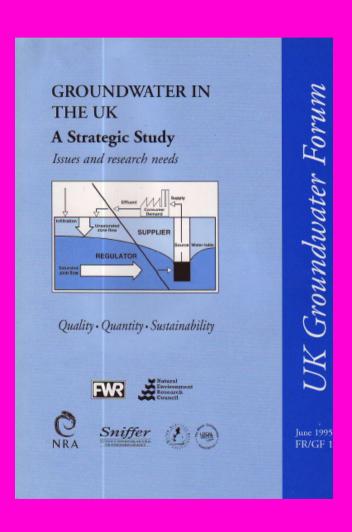


Main outputs of the initiative have been in outreach and stakeholder coordination

- Professional dialogue
- Public and popular information
- UK and Ireland wide coordination

A driver for the LOCAR thematic research programme

### 1995 Groundwater Strategic Study



But the report shows how much perspectives can change in 15 years

- Pre-dates EPA part IIA
- Pre-dates WFD
- "underground" rather than"catchment" in focus
- Narrow perspectives on land and water interaction and on groundwater and ecosystem function
- Little challenging on tools (data and modelling)
- Nothing on training and professional development

Three successes

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#### Professional development

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#### Risk based approaches

- scientifically underpinned pragmatism

Three challenges

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#### **Datasets**

- Obtaining and maintaining the right datasets for today's and tomorrow's decisions

### Invest in data!

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DEPARTMENT OF SCIENTIFIC & INDUSTRIAL RESEARCH

GEOLOGICAL SURVEY OF GREAT BRITAIN; ENGLAND AND WALES

Wartime Pamphlet No. 32.

WATER SUPPLY FROM UNDERGROUND SOURCES
OF THE

BIRMINGHAM - GLOUCESTER DISTRICT

(QUARTER-INCH GEOLOGICAL SHEET 15, WESTERN HALF)

PART II - WELL-CATALOGUE FOR NEW SERIES

ONE-INCH SHEET 168 (BIRMINGHAM)

By

A. J. Butler, M. Sc.

and

J. Lee

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Geological Survey & Museum, Exhibition Road, South Kensington, S.W. 7. July, 1943



#### Water Resources Act 1963

**1963 CHAPTER 38** 

An Act to provide for the establishment of river authorities and a Water Resources Board, to confer on them, and on the Minister of Housing and Local Government, new functions in relation to water resources in England and Wales, and to provide for the transfer to river authorities of functions previously exercisable by river boards and other bodies; to make further provision for controlling the abstraction and impounding of water, for imposing charges in respect of licences to abstract or impound water, and for securing the protection and proper use of inland waters and water in underground strate, to enable corresponding provision to be made in relation to the Thames and Lee catchiment areas and certain other areas in or adjacent to London, and for purposes connected with the

[31st July 1963

1940s 1960s

### Three challenges

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#### Science funding

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Making the right small decisions within the big picture

- Coping with the complexity of catchments and engaging stakeholders

"Groundwater (management) will continue to require nerve, verve and imagination." •

Downing 1993