

## Preface

At many places all over the world groundwater has become contaminated, mostly as a result of poorly designed hazardous waste disposal facilities, leakage from underground storage tanks and mine tailings, and accidental spills. Groundwater pollution can also be caused by application of fertilizers and pesticides in agriculture. The chemicals trapped in the subsurface constitute a major long-term contamination source to a groundwater system, resulting in a threat to groundwater supply and a direct risk to human health, for example by volatilization of toxic compounds.

Once a groundwater system becomes contaminated it is almost impossible to clean it up. Many contaminants are persistent and remain hazardous even at low concentrations.

This publication comprises the proceedings of the International Conference on Groundwater Quality: Remediation and Protection (GQ'98) held at Tübingen, Germany, in September 1998. As at the two previous conferences in the series, GQM'93\* (held in Estonia in 1993) and GQ'95† (held in the Czech Republic in 1995), the major objectives of the GQ'98 Conference were to provide an international forum for state-of-the-art presentations on relevant methodologies and techniques, and to identify the needs for future developments. The conference focused on practical approaches to assess groundwater quality, viable solutions to contamination problems, and methods for protection. Also addressed were directly applicable methods for common field problems. Of particular interest were:

- *identification of processes and parameters limiting clean-up efficiency;*
- *methods to assess and monitor groundwater quality at field scale;*
- *reactive transport/modelling in heterogeneous environments;*
- *innovative remediation techniques.*

This volume contains 89 papers spread over six topics. In addition to all orally presented papers, this volume also contains a number of (shorter) poster papers at the end of each section. The papers were selected by the Scientific Advisory Committee from about 200 submitted abstracts.

The Editors:

**Mike Herbert**

*Applied Geology Group, Geological Institute, University of Tübingen,  
Sigwartstrasse 10, D-72076 Tübingen, Germany*

**Karel Kovar**

*National Institute of Public Health and the Environment (RIVM),  
PO Box 1, 3720 BA Bilthoven, The Netherlands*

\* The proceedings of GQM'93 were published as IAHS Publ. no. 220 in the same series as this proceedings volume.

† The proceedings of GQ'95 were published as IAHS Publ. no. 225 in the same series as this proceedings volume.