



Brief report on the Ineson Lecture and supporting talks, 2009

The 2009 Ineson lecture was held at Burlington House in London, at the offices of the Geological Society of London, on 15 October 2009. This year's Ineson lecture was given by Professor Denis Peach, Chief Scientist of the British Geological Survey on the subject 'Hydrogeological science over the past thirty five years – where will the next ten years lead?'. It was supported by five talks on very different aspects of hydrogeology from young researchers representing the future of hydrogeology. The meeting was well attended by hydrogeologists from academia, consultancy, water companies, the regulatory sector, and by students, and was followed by a wine reception.

The first of the supporting talks was by Stefan Krause of Keele University, who focussed on novel research on biogeochemical cycling at the hyporheic zone – the critical interface between groundwater and surface water. Mark Zeitoun, of the University of East Anglia, discussed the Palestinian-Israeli pumping record and whether better hydrogeological data encourages better resolution of conflict over transboundary aquifers. Mohammad Shamsudduha, of University College London, presented research into the impacts of abstraction and climate change on groundwater resources in the Bengal Basin, the largest of the world's mega-deltas. Ryan Law, of Geothermal Engineering, talked about exciting new opportunities for the development of geothermal energy from depths below 3 km. Finally, Simon Mathias, of Durham University, spoke on the importance of hydrogeological research in carbon capture and storage.

Professor Denis Peach's lecture spanned his career in hydrogeology over thirty five years, during which time he has worked for a UK water authority, in international consultancy, and for the last twelve years for the British Geological Survey. Denis' talk covered a broad range of hydrogeological issues from groundwater hazards, such as karstic flooding and gypsum dissolution, to groundwater resources, such as enhancing recharge in semi-arid areas. His main message was the critical role of geology in controlling aquifer heterogeneity, and the importance of understanding the geology, at multiple scales, in order to effectively understand groundwater systems. Towards the end of his talk Denis highlighted some of the critical issues for hydrogeologists over the next ten years, including carbon capture and storage, urban hydrogeology, and the use of 3D modelling tools. He finished by saying that the hydrogeological community needs both mathematical modellers and hydrogeological generalists; that we need to think beyond traditional hydrogeological boundaries and work with experts in soil, biology, sediment transport and socio-economics, among others; and that we need to develop a better understanding of uncertainty.