

CV - Klaus Hinsby, GEUS




G E U S

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Name Klaus Hinsby
Date of Birth January 4, 1960
Nationality Danish
Education M.Sc, Geological Institute, University of Copenhagen, 1988. Specialisation: hydrochemistry

Employment Record

Year	Organisation	Position and Responsibilities
1988-date	Geological Survey of Denmark and Greenland (GEUS)	Sr. Scientist / Research hydrogeologist (since 2000)

Main interests and competences

Groundwater chemical status assessment for protection of water resources and associated aquatic and dependent terrestrial ecosystems e.g. according to EU Water Framework and Groundwater Directives
Water resources evaluation and quality/quantity relations in aquifers including delineation of groundwater quality interfaces at local and regional scales
Use of environmental tracers and groundwater dating (age estimation) for evaluation of groundwater flow and groundwater age/quality relations
Evolution of natural groundwater chemistry and recognition of human impacts and saltwater in aquifers
Geophysical well logging, level-accurate groundwater sampling and hydraulic test methods for characterisation of aquifers and other reservoirs

Selected Experience Record –

Project manager of the GEUS part, and leader of workpackage 3 “Climate change impacts on the living environment and territorial development” of the EU Baltic Sea Region project “BaltCICA” – Climate Change: Impacts, Costs and Adaptation in the Baltic Sea Region, 2009-2011, which includes 23 partners from 8 EU countries around the Baltic Sea www.baltcica.org

Project manager of the GEUS part, and leader of workpackage 7 “groundwater status assessment and EU directives” of the EU Interreg North Sea project “CLIWAT” – Adaptive and sustainable water management and protection of society and nature in an extreme climate, 2008-2011, which includes partners 14 partners from Denmark, Germany, the Netherlands and Belgium. www.cliwat.eu.

Project Manager of Danish part of the EU framework VI project “BRIDGE” and chair of the Work Package conducting case studies to evaluate groundwater threshold values, as required by the Water Framework and Groundwater Directives, in 14 European countries, 2004-2006, www.wfd-bridge.net

Project Manager of Danish part of the EU Interreg North Sea project: Ancient groundwater reservoirs in buried valleys – sustainable water resources for the future (“BurVal”), 2003-2006, www.burval.org.

Participant in Fact Finding Mission for new Danida (RUF/ENRECA) program on Water Resources Research in Vietnam, May 26 – June 6, 2003.

Project manager on the Danish part of the EU Framework V research project "BASELINE" : Natural Baseline Quality of European Groundwaters 2000-2003.

Project manager on the Danish part of the International Atomic Energy Agency’s (IAEA) coordinated research programme: "Isotope response to hydrological systems to long-term exploitation" 1999-2003.

Project manager on the EU project “FRACARES: – two-phase flow modelling in a fractured carbonate” subproject on geophysical logging and hydraulic testing of deep oil and water wells in Portugal, 1998-2001.

Project manager on the Danish part of the EU research project “PALAEAUX” Management of coastal aquifers in Europe -Palaeowaters, natural controls and human influence. EU Framework IV Project ENV4-CT95-0156, 1996-1999.

Project manager of the Danish part of the International Atomic Energy Agency (IAEA) Coordinated Research Programme "Use of isotopes for analyses of flow and transport dynamics in groundwater systems" 1996-1998.

Scientific publications – selected references

Published 15 journal papers in ISI registered international scientific journals with about 175 ISI citations (June 2011), 4 papers in Geological Society, London, Special Publications, 2 IAEA TECDOC papers from IAEA coordinated research programmes, and 4 international peer reviewed book chapters.

International journals – most recent references (sorted by year)

- Tran, LT, F. Larsen, NQ. Pham, AV Christiansen, HV Van, LV Tran, HV Hoang and **K. Hinsby**. 2011 Origin and Extent of Fresh Groundwater, Salty Paleowaters and Saltwater Intrusion in Red River flood plain aquifers, Vietnam. *Hydrogeology Journal*, submitted.
- Hinsby, K.**, Markager, S.S., Kronvang, B., Windolf, J. and Sørensen, L.T. 2011. Groundwater threshold values and management options for nutrients to ensure good ecological status of Horsens Estuary, Denmark. *Water Resources Research*, submitted 15. April 2011.
- Sonnenborg, T.O., **K. Hinsby**, L. Van Roosmalen and S. Stiesen. 2010. Assessment of climate change impacts on the quantity and quality of a coastal catchment using a coupled groundwater - surface water model, *Climatic Change*, submitted.
- Vandenbohede, A., **K. Hinsby**, C. Courtens and L. Lebbe, 2011. Flow and transport model of a polder area in the Belgian 1 coastal plain. 2 example of data integration. *Hydrogeology Journal*, accepted.
- Scharling, P. B., E. S. Rasmussen, T. O. Sonnenborg, P. Engesgaard and **K. Hinsby**. 2009. Three-dimensional regional-scale hydrostratigraphic modeling based on sequence stratigraphic methods: a case study of the Miocene succession in Denmark, *Hydrogeology Journal*, 17(8), 1913-1933.
- Auken, E., K. Sorensen, H. Lykke-Andersen, M. Bakker, A. Bosch, J. Gunnink, F. Binot, G. Gabriel, M. Grinat, H. M. Rumpel, A. Steuer, H. Wiederhold, T. Wonik, P. F. Christensen, R. Friborg, H. Guldager, S. Thomsen, B. Christensen, **K. Hinsby**, F. Jorgensen, I. M. Balling, P. Nyegaard, D. Seifert, T. Sormenborg, S. Christensen, R. Kirsch, W. Scheer, J. F. Christensen, R. Johnsen, J. Pedersen, J. Kroger, M. Zarth, H. J. Rehli, B. Rottger, B. Siemon, K. Petersen, M. Kjaerstrup, K. M. Mose, P. Erfurt, P. Sandersen, V. Jokumsen and S. O. Nielsen. 2009. Buried Quaternary valleys - a geophysical approach, *Zeitschrift der Deutschen Gesellschaft für Geowissenschaften*, 160(3), 237-247.
- Hinsby, K.**; Condeso de Melo M.T. and Dahl, M. 2008. European case studies supporting the derivation of natural background Levels and groundwater threshold values for the protection of dependent ecosystems and human health. *Science of the Total Environment*, 401, 1-20.
- Larsen, M.A.D., Søgaaard, H. and **Hinsby, K.** 2008. Temporal trends in N & P concentrations and loads in relation to anthropogenic effects and discharge in Odense River 1964-2002. 2008. *Hydrology Research*, 39, 41-54.
- Seifert, D., Sonnenborg, TO, Scharling, P. and **Hinsby, K.** 2008. Impact of buried valley on groundwater vulnerability. *Hydrogeology Journal*, 16: 659–674, DOI 10.1007/s10040-007-0252-3
- Troldborg, L., Refsgaard, JC., Jensen, KH, Engesgaard, P. and **Hinsby, K.** 2008. Use of environmental tracers in hydrological modeling of complex aquifers. *J. Hydrol. Engineering ASCE*, 1037-1048, DOI: 10.1061/(ASCE)1084-0699(2008)13:11(1037)
- Wendland, F., Blum, A., Coetsiers, M., Gorova, R., Griffioen, J., Grima, J., **Hinsby, K.**, Kunkel, R., Marandi, A., Melo, T., Panagopoulos, A., Pauwels, H., Ruisi, M., Traversa, P., Vermooten, J.S.A., and Walraevens, K. 2008. Aquifer typology: A practical framework for an overview of groundwater composition at a European scale. *Environ Geol*, 55, 77–85, DOI 10.1007/s00254-007-0966-5.
- Hinsby, K.**; Højberg, A.L.; Engesgaard, P.; Jensen, K.H.; Larsen, F., Busenberg, E. and Plummer, L.N. 2007. Transport and degradation of chlorofluorocarbons (CFCs) in the pyritic Rabis Creek aquifer, Denmark. *Water Resources Research*, doi:10.1029/2006WR005854.
- Alvarado, J.A.C., R. Purtschert, **K. Hinsby**, L. Troldborg, M. Hofer, R. Kipfer, W. Aeschbach-Hertig, H. Arno-Synal (2005). ^{36}Cl in modern groundwater dated by a multi tracer approach ($^3\text{H}/^3\text{He}$, SF_6 , CFC-12 and ^{85}Kr): A case study in Quaternary sand aquifers in the Odense Pilot River Basin, Denmark. *Applied Geochemistry*, 20, 3, 599-609.
- Engesgaard, P.; Højberg, A.L.; **Hinsby, K.**, Laier, T., Jensen, K.H, Larsen, F, Busenberg, E. and Plummer, L.N.. 2004. Transport of CFCs in the unsaturated zone, Rabis Creek, Denmark. *Vadose Zone Journal*, 3, 1249-1261

Science book series papers and book chapters with peer review (sorted by year)

- Hinsby, K.** and Jørgensen, L.F. 2009. Groundwater monitoring in Denmark and the Odense Pilot River Basin in relation to EU legislation. In: Ph. Quevauviller et al. (eds) Groundwater Monitoring, Wiley.
- Goody, D. and **Hinsby, K.** 2008. Organic Quality of Groundwaters. In: Edmunds, W.M. and Shand, P. (eds.) Natural Groundwater Quality. Wiley-Blackwell, <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1405156759.html>
- Hinsby, K.** and Rasmussen, E.S. 2008. The Miocene sand aquifers, Jutland, Denmark. In: Edmunds, W.M. and Shand, P. (eds.) Natural Groundwater Quality. Wiley-Blackwell, <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1405156759.html>
- Hinsby, K.**, Purtschert, R. and Edmunds, W.M. 2007. Groundwater age and quality. In: Quevauviller, P. Groundwater Science and Policy, RSC publishing, 754 pp. <http://www.rsc.org/shop/books/2007/9780854042944.asp>
- Buckley, D.K., **Hinsby, K.**, & Manzano, M. 2001. Application of geophysical borehole logging techniques to examine coastal aquifer palaeohydrogeology. In: Edmunds and Milne (Eds.): Palaeowaters in Coastal Europe: evolution of groundwater since the late Pleistocene. Geological Society, London, Special Publication, no. 189, 251-270.
- Edmunds, W.M.; **Hinsby, K.**; Marlin, C.; Melo, T.; Manzano, M.; Vaikmaa, R. and Travi, Y. 2001. Evolution of groundwater systems at the European coastline. In: Edmunds and Milne (Eds.): Palaeowaters in Coastal Europe: evolution of groundwater since the late Pleistocene. Geol. Soc. Spec. Publ., 189, 289-312.
- Hinsby, K.**; Edmunds, W.M.; Loosli, H.H; Manzano, M.; Melo, M.T.C. & Barbecot, F. 2001. The modern water interface: recognition, protection and development - Advance of modern waters in European coastal aquifer systems. In: Edmunds and Milne (Eds.): Palaeowaters in Coastal Europe: evolution of groundwater since the late Pleistocene. Geol. Soc. Spec. Publ., 189, 271-288.
- Hinsby, K.**, Harrar, W.G., Nyegaard, P., Konradi, P., Rasmussen, E.S., Bidstrup, T., Gregersen, U. & Boaretto, E. 2001. The Ribe Formation in western Denmark: Holocene and Pleistocene groundwaters in a coastal Miocene sand aquifer. In: Edmunds and Milne (Eds.): . Palaeowaters in Coastal Europe: evolution of groundwater since the late Pleistocene. Geol. Soc. Spec. Publ., 189, 29-48.