

CURRICULUM VITAE

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Personal information

Family name: Querner
 First names: Erik Paul
 Profession: Consultant
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Employer

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Education

From	To	Degree	Institution (Major subjects)
1970	1974	BSc	College of Advanced Technology, Zwolle, The Netherlands (Civil Engineering)
1977	1979	Diploma in Eng.	University of Cape Town, South Africa (Civil Eng., hydraulics)
1982	1982	Professional Eng. South Africa	South African Council for Professional Engineers, Johannesburg, 1 st June 1982
1990	1993	PhD	Wageningen University, The Netherlands (Water Management)

Languages

Dutch	Mother tongue
English	Good
German	Fair
Spanish	Poor

Key qualifications

Erik Querner is an experienced research scientist and consultant in the field of water management. His work has focussed on regional hydrology (groundwater and surface water), eco-hydrology and physically based modelling. In the research he has gained experience in dealing with water aspects in the rural areas: agriculture, wetlands, peat lands and irrigation. He has experience in river basin modelling related to floods, droughts and climate change. He has experience with the European legislation on the Water Framework Directive and on Natura 2000.

Experience record (overview)

2013 to date	Private consultant, Querner Consult
1984 to 2015	Senior Research Scientist at Alterra, Wageningen Univ. and Research
1980 - 1983	Specialist on water at DHV consulting Engineers, Amersfoort, The Netherlands
1974 - 1980	Engineer at Ninham Shand Consulting Engineers, Cape Town, South Africa

Experience in Third countries

long-term:

South-Africa (5 years)

short term:

South Africa, Zambia, Gabon, Ghana, Nigeria, Argentina, Chile, Poland, China, Brazil, Estonia, Lithuania, Portugal, Serbia, Morocco, Czech Republic and Slovakia.

Training and lecturing

Assistance to users in applying regional hydrological models in Poland, Lithuania, Russia, Argentina, China, Brazil, Czech Republic, Italy, Zambia and South Africa.
Capacity Building for Academic and Research Staff at Copperbelt University, Zambia (3 missions).
Supervisor of students for an MSc thesis (22x) and advising PhD students (5x).
Supervisor of fellowships coming from: Poland, China, Argentina, Lithuania, Russia, Bulgaria, Brazil and South Africa.

Recent key projects

Country	Period	Function	Description
Netherland	2018-date	Consultant	Updating the geo-hydrological data of the regional model SIMGRO for the Drentsche Aa. Client Prov. of Drenthe and in corporation with SWECO
Netherland	2018-date	Project leader	Evaluation of historical hydrology Drentsche Aa in corporation with Univ. of Groningen and Water Board Hunze & Aa's
Netherlands	2016-2018	Project leader	Carry out project on water management issues and climate change for Water Board Hunze & Aa's
Netherlands	2017-2019	Consultant	Investigate flooding of farmland from various farmers or from insurance companies in Utrecht, Brabant, Limburg and Overijssel.
Pakistan	2015-2017	Advisor	Advice to a PhD candidate from Pakistan: the use of the SWAT model and hydrological issues
Netherlands	2016	Consultant	Carry out project on water management issues in the Drentsche Aa for Water Board Hunze & Aa's
Kenia	2015-2016	Advisor	Project for Naga foundation for re-greening the desert
Europe	2014-2016	Consultant	Evaluator of LIFE project proposals (European Commission)
Ghana, Angola	2013 - date	Advisor	Advise on the design of storm water ditches at warehouses

Gabon	2013	Advisor	Advice on using GIS data and drainage situations for an oil palm plantation (Client Olam Int. Ltd)
South Africa	2011-2015	Senior specialist	More food on less feet – hydrological analysis for the Limpopo basin, Southern Africa
Zambia	2011-2014	Lecturer	Training missions to support Copperbelt University (CBU) in Kitwe, Zambia (Client Nuffic)
Africa	2011-2015	Senior Specialist	EU funded project: Water for food production (EAU4FOOD), with a focus on the Limpopo basin, Southern Africa
Netherlands	2010-2013	Project leader	Analysis of flow resistance in Dutch Rivers of the natural vegetation
Nile basin countries	2011-2012	Senior specialist	World bank project: Dev. of agricultural model for the Nile basin – hydrological expert
Argentina	2011	Project leader	Expert advice on groundwater availability for 2 farms near San Carlos (Client Farm Frites International BV, Netherlands)
Africa	2010-2011	Project leader	Water scarcity Africa: A GIS and modelling approach for the entire continent
Europe, Brazil	2008-2011	Project leader	Prediction of Drought in River Basins (Rhine basin, Paraguay River basin)
Mediterranean	2009-2011	Senior specialist	EU funded project: Assessment of ground and surface water interaction to determine flow variability and longitudinal dynamics, pilot in Greece (MIRAGE)
Argentina	2008-2009	Project leader	Advisor for construction of polder in the Parana Delta used as Pecan plantation (Client Faro Capital S.A., Buenos Aires)
Netherlands	2008-2009	Project leader	Pilot study to propose measures to reach WFD and Natura 2000 goals in the Drentsche Aa river basin
Netherlands	2006-2009	Project leader	Groundwater management innovation for meeting Climate change and Water Framework Directive targets: Pilot study Lankheet
Argentina	2002-2006, 2008	Project leader	Pilot studies for Sustainable water management (Client Dutch Embassy in Buenos Aires)
Serbia	2006-2008	Senior specialist	Hydrological advice for the project on Adaptive Management Planning of Riverine Wetlands along the Danube in Serbia
Lithuania	2004-2006	Senior specialist	Analysis of water management measures in the Dovine River basin for the Management and Restoration of Natura 2000 sites
Netherlands	2002-2005	Project leader	Impact assessment of measures in the upstream part of the Drentse Aa River basin to reduce flooding
Brazil	2004	Senior specialist	Hydrological Impact assessment for the Taquari River basin in the Pantanal wetland
Europe	2002-2004	partner	EU project: Analysis, Synthesis and Transfer of Knowledge and Tools on Hydrological Drought Assessment through a European Network (ASTHyDA)

Europe	2002-2004	partner	EU project: Towards natural flood reduction strategies (EcoFlood)
Poland	1999-2003	Project leader	Hydrological System Analysis in the Valley of Biebrza River

Working groups and other qualifications

As an expert part of the Dutch Risk Reduction Team (DRR Team) initiated by the Dutch Government in case of tackling urgent water issues abroad (from 2014 onwards).
Member of two FRIEND working groups: a) Low flows and droughts; b) Catchment hydrological and biochemical processes (from 1995 onwards).
Member of editorial council of the Journal for Water and Land Development, Poland (from 2000 onwards).
Reviewer of proposal for National Science Foundation (NSF) program on Climate and Large-Scale Dynamics, USA; National Commission for CONICYT, Santiago, Chile; Grant Agency of the Academy of Sciences of the Czech Republic
Reviewer for a number of journals: Hydrological Sciences Journal; Journal of Hydrology, Journal of Irrigation and Drainage Engineering, USA; Agricultural Water Management.

Key Publications

Erik Querner was (co-)author of more than 130 publications, of which more than 35 in peer reviewed journals. Other publications are professional papers and reports for national/international organizations and conference proceedings. A complete list is available on request. Selection of publications:

- Querner, E.P., Erik Meijles, Harry Jager, Paul Hendriks and Theo Spek, 2018. Physically based modelling: historical hydrology for future water management Drentsche Aa. Session HS1.8: History of Hydrology. Vol. 20, EGU2018-8303, 2018.
- Querner, E.P., J. Froebrich, F. Gallart, M.M. Cazemier, O. Tzoraki, 2016. Simulating stream flow variability and aquatic states in temporary streams using a coupled groundwater – surface water model. Hydrological Sciences J., Vol. 61, no. 1, pp. 146-161
DOI:10.1080/02626667.2014.983514
- Querner, E.P., P.C. Jansen, J.J.H. van den Akker and C. Kwakernaak, 2012. Analysing water level strategies to reduce soil subsidence in Dutch peat meadows. J. of Hydrology, Volumes 446-447(2012), pp. 59-69
- Querner E.P., Vernooij M., Padadoulakis, V., Froebrich, J., 2011. Using SIMGRO for flow characterisation of temporary streams, as demonstrated for the Evrotas basin, Greece. In: C. Abesser, G. Nutzmann, M.C. Hill, G. Bloschl, E. Lakshmanan (eds), Conceptual and Modelling Studies of Integrated Groundwater, Surface Water, and Ecological Systems (Proceedings of Symposium H01 held during IUGG2011, Melbourne, Australia, July 2011). IAHS Publ. 345, 2011. pp. 242-248.
- Waldemar Mioduszewski, Erik P. Querner, Justyna Bielecka, 2011. Modelling of groundwater fluctuations in the area between the Narew and Suprasl Rivers. In: D. Swiatek and T. Okruszko (eds.), Modelling of Hydrological Processes in the Narew Catchment, Geoplanet: Earth and Planetary Sciences, DOI: 10.1007/978-3-642-19059-9, @ Springer-Verlag Berlin Heidelberg 2011; pp. 81-89
- Querner, E.P. and H.A.J. van Lanen, 2010. Using SIMGRO for drought analysis – as demonstrated for the Taquari Basin, Brazil. In: E. Servat, S. Demuth, A. Dezetter and T. Daniell. Global Change: Facing Risks and Threats to Water Resources (Proc. of the Sixth World FRIEND Conference, Fez, Morocco, October 2010). IAHS Publ. 340, 2010. pp. 111-118.

- Querner, E.P., W. Mioduszewski, A. Povilaitis & A. Ślesicka, 2010. Modelling Peatland Hydrology: Three Cases from Northern Europe, Polish J. of Environ. Studies, Vol. 19, no 1, 2010: pp. 149-159.
- Querner, E.P. and A. Povilaitis, 2009. Hydrological effects of water management measures in the Dovinė River Basin, Lithuania. *Hydrological Sciences Journal*, 54(2) April 2009: pp. 363-374.
- Querner, Erik, José Morabito y Pablo Mercuri, 2009. Modelos hidrológicos como herramientas de gestión. *Hydria* Feb. 2009, 5(21), pp. 12-14.
- Querner, E.P., J.A. Morábito and D. Tozzi, 2008. SIMGRO, a GIS-Supported Regional Hydrological Model in irrigated Areas: Case Study in Mendoza, Argentina. *J. of Irrigation and Drainage Engineering*. Vol. 134, No. 1 Jan/Feb. 2008: pp. 43-48.
- Querner, E.P., P. C. Jansen and C. Kwakernaak, 2008. Effects of water level strategies in Dutch peatlands: a scenario study for the polder Zegveld. In: C. Farrell and J. Feehan (Eds.). *Proc. 13th International Peat Congress: After Wise Use – The Future of Peatlands*. Tullamore, Ireland, 8-14 June, 2008, pp. 620-623.
- Querner, E.P., 2007. Water management measures analysed for Dutch basins to reduce flooding. *Journal of Water and Land Dev.*, Poland No.11: 45-58.
- Querner, E.P. and H.M. Mulder, 2007. Hydrological analysis for meeting Climate change effects and European Water Framework Directive targets. *Journal of Water and Land Dev.*, Poland No.11: 59-69.
- Querner, E.P. and M. Rakhorst, 2006. Impact assessment of measures in the upstream part of Dutch basins to reduce flooding. In: *Climate Variability and Change – Hydrological Impacts* (Ed. S. Demuth, A. Gustard, E. Planos, F. Scatema and E. Servat). *Proc Fifth FRIEND World Conference*, Havana, Cuba, Nov. 2006. IAHS Publ. 308, IAHS Press, Wallingford, UK, pp.180-186.
- Querner, E.P., R. Jonker, C. Padovani, B. Soriano and S. Galdino, 2005. Impact of climate change and agricultural developments in the Taquari River basin, Brazil. In: T. Wagener et al. (Eds), *Regional Hydrological Impacts of Climatic Change – Impact Assessment and Decision Making*. *Proc of Symp. 6, IAHS Scientific Ass. Foz de Iguacu, Brazil, April 2005*. IAHS Publ. 295: pp. 19-25.
- Marinov, D., E.P. Querner and J. Roelsma, 2005. Simulation water flow and nitrogen transport for a Bulgarian test plot by SWAP and ANIMO models. *Journal of Contaminant Hydrology*, 77 (2005): pp 145-164.
- Querner, E.P., A. Ślesicka and W. Mioduszewski, 2004. Ecohydrological system analysis of the Lower Biebrza Basin. *J. of Ecohydrology & Hydrobiology*. Vol. 3(4): 307-313.
- Querner, E.P., 2002. Analysis of basin response resulting from climate change and mitigation measures. In: H. van Lanen and S. Demuth (Eds), *FRIEND 2002, Bridging the gaps between research and practice* (ed.). 4th Int. Conf. on Friend, Cape Town, South Africa, March 2002. IAHS Publ. no. 274: 77-84.
- Kupper, E., E.P. Querner, J.A. Morábito and M. Menenti, 2002. Using the SIMGRO regional hydrological model to evaluate salinity control measures in an irrigation area. *Agric. Water Man.* 56: 1-15.
- Querner, E.P. & H.J. van Lanen, 2001. Impact assessment of drought mitigation measures in two adjacent Dutch basins using simulation modelling. *J. of Hydrology*, 252: 51-64.
- Querner, E.P., 2000. The Effects of Human Interventions in the Water Regime. *Ground Water*, 38(2):167-171.
- Querner, E.P., 1997. Description and application of the combined surface and groundwater flow model MOGROW. *J. of Hydrology* 192: 158-188.
- Querner, E.P., 1997. A model to estimate timing of aquatic weed control in drainage canals. Part 1. *J. of Irrigation and Drainage Systems* 11(2): 157-169
- Querner, E.P., 1997. Flow resistance and hydraulic capacity of water courses with aquatic weed growth. Part 2. *J. of Irrigation and Drainage Systems* 11(2): 171-184
- Querner E.P., 1993. Aquatic weed control within an integrated water management framework. Doctoral thesis, Agric. University Wageningen. Also published as Report 67, DLO Winand Staring Centre (SC-DLO). 204 pp.

Annex

Experience record

- 1974-1980 Ninham Shand Consulting Engineers, Cape Town, South Africa
Hydraulic design of a canalization project (\$ 10 mln). Resident Engineer on one construction project of this canalization scheme.
Hydrological studies for a number of rivers and irrigation systems; including software development.
- 1980-1983 DHV consulting Engineers, Amersfoort, The Netherlands
Studies of sediment transport, rainfall distribution and urban drainage.
Hydraulic analysis for a number of projects (e.g. North Jezira Project, Iraq)
Software development for design and control of drinking water distribution systems.
- 1984-1993 Research Scientist at Alterra
Development of regional groundwater flow models for steady and unsteady state (saturated and unsaturated zone).
Member of the IIASA-working group: "Optimisation, Technical and Economical, of Regional Water Management".
Salinity control through regional water management in the South Western part of The Netherlands.
Development of an integrated surface water and groundwater flow model (MOGROW). Aquatic weed control in drainage systems and the related aspects of weed growth and the corresponding flow resistance (research for PhD thesis).
- 1994-2015 Senior Research Scientist at Alterra
Advisor on hydrological aspects in projects in Poland, Lithuania, Russia, China, Argentina, Brazil and Italy.
Project carried out to determine the influence of man induced changes to the hydrological system in the Netherlands during the last 40 years.
Advisor for project: Assessment of the effect of changes in water management within the Central Biebrza Basin, Poland.
Project leader of Polish-Dutch cooperation: Hydrological System Analysis in the Valley of Biebrza River.
Analysis of water management measures for groundwater dependent nature (Dutch Ministry for Agriculture, Nature and Food Quality).
Contribution to national study on water management in the 21st century: predict changes in river flows from climate change and efficiency of mitigation measures.
Projects in Argentina on sustainable water management. Dealing with flooding in the Pampas and irrigation water management in the Province of Mendoza.
Hydrological modelling of peat lands in the Netherlands, Poland, Lithuania and Indonesia to advice on measure for wetland restoration.
Impact assessment of climate change and agricultural developments in the Pantanal area using hydrological models, Brazil.
Project leader for study of proposed measures to reach WFD and Natura 2000 goals in the Drentsche Aa river basin
Project leader for study on groundwater management innovation for meeting Climate change and Water Framework Directive targets: Pilot study Lankheet
Project leader for drought analysis study in the framework of the FRIEND V working group (pilot areas are Taquari River in the Pantanal, Brazil; Rhine basin).
Senior hydrological expert in different projects (EU: MIRAGE, EAU4FOOD) and Nile basin Agricultural Model development.