

# Curriculum Vitae

Name	J.E. HUNINK
First Name	Johannes
Date of Birth	14 January 1978
Nationality	Dutch
Main Disciplines	Hydrology, Remote Sensing, Computational tools and models, Water resources planning and forecasting
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## Key Qualifications

Johannes Hunink (M.Sc.) is a water management specialist with experience in flood hazard assessments, urban drainage studies, and planning of surface - and groundwater resources. His particular interest is in the use of remote sensing data with GIS for water resource management and hydrological modeling. He has experience with a wide range of commercial and freely distributed hydrological and flood routing models. However, his major skills are in the design and actual development of computational tools for water resources planning and forecasting. His MSc Thesis was about developing and programming a tool that allowed modeling hydrological processes on different scales simultaneously. Johannes has worked for a broad range of organizations and has lived in various countries including Ecuador, The Netherlands and Spain.

## Educational background

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| 2003 – 2006 | MSc Computational Bio- and Physical Geography. Universiteit van Amsterdam, The Netherlands, M.Sc. Thesis: The Multiple Scale Modeling Framework: a computational tool to facilitate investigation in hydrological processes on different scales. |
| 2000 – 2003 | BSc Physical Geography, Faculty of Science, Universiteit van Amsterdam, The Netherlands. Subjects: groundwater- and surface water-hydrology, soil physics and chemistry, geomorphology   |
| 1997 – 1999 | BSc Physics (first 2 years), Vrije Universiteit Amsterdam, The Netherlands. Subjects: numerical methods, programming, fluid mechanics.   |

## Professional Experience

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|----------------|---|
| 2009 - present | Hydrologist, Future Water, Wageningen, The Netherlands                            |
| 2006 – 2009    | Water Management Consultant, TYPESA (Técnica y Proyectos S.A.), Barcelona, Spain. |

- 2004 Hydrologist trainee, Ecociencia research institute, Quito, Ecuador
- 2003 Consultant trainee, Tauw BV, Amsterdam, The Netherlands

### **Overseas Professional Experience**

Resident:

Spain (4 years), Ecuador (5 months)

Non-resident assignments:

Ethiopia, Kenya, Albania, Uzbekistan, Morocco

### **Selection of Assignments and Projects**

- 2011 Proof-of-concept of the Green Water Credits initiative in Sebou basin, Morocco, assessing upstream-downstream interaction in terms of water and sediment flows for improved water and soil management.
- 2010 - 2011 Crop modeling of Climate Change vulnerability and adaptation strategies for agricultural systems in Uzbekistan and Albania (World Bank study).
- 2010-2011 Data analysis and soil erosion modeling for baseline survey on reservoir sedimentation in Tana basin, for the Water Resources Management Authority of Kenya.
- 2010 Trainer and lecturer during Course organized by FutureWater on Public Domain Models for Water, Food and Climate Studies for international water experts.
- 2009 Principle researcher in a pilot project with the Dutch National Institute for Public Health and the Environment (RIVM) focused on the suggested relation between the Q fever transmission to humans and local environmental conditions as soil moisture, vegetation and wind speed.
- 2009-2010 Researcher and trainer in an IFAD (International Fund for Agricultural Development) supported project to implement the Green Water Credits (GWC) mechanism in the Tana basin in Kenya for improved water and soil management. Assessment of water sources, flows and demand using hydrological model SWAT.
- 2008-2009 Researcher and advisor for a groundwater management plan for the Catalanian Water Agency. Modeling using MODFLOW to obtain insight in the water balance and the effects of different management scenarios.
- 2008 On loan at the Catalanian Water Agency - Spain as a researcher/advisor on remote sensing and planning of water resources, combining different observed and forecasted data sources in a decision support tool
- 2008 Leader of a project assessing debris flow hazards in the Pyrenees, setting out a new methodology and using a 2-dimensional flood routing model for mud and debris flows (FLO-2D)

- 2007 Principle consultant for a project aiming to reduce discharges of combined sewer systems to the environment. Fieldwork and modeling (10 municipalities), using urban drainage package Infoworks CS
- 2006 Principle consultant of a Stormwater Drainage Plan of 6 coastal municipalities in Catalonia using the hydrological model MIKE SHE (DHI).
- 2005 Design of publicity campaign focused on water conservation and environmental sustainability for a golf resort (Spain).
- 2004 Principle investigator in a project that evaluated the influence of land-use changes on hydrology using basin hydrological model SWAT in Cotopaxi region, Ecuador.

**Language Skills**

- Dutch: mother tongue
- English: fluent in writing and speech
- Spanish: fluent in writing and speech
- Catalan: fluent in writing and speech
- German: moderate
- French: moderate

**Computer Skills**

- GIS/RS: ArcGIS, Erdas Imagine, Idrisi, Surfer.
- Simulation models: MIKE SHE, SWAT, HEC-HMS, HEC-RAS, SOBEK, FLO-2D, Infoworks CS, Visual Modflow, Aquacrop, WEAP, SWAP.
- Databases: MS Access, MySQL
- Others: MatLab, Visual Basic, HTML, Macromedia Flash, Python

**Additional courses**

- 2008 Workshop about *Earth Observation Radar Systems* organized by the Catalan Cartographical Intitute
- 2008 Workshop about Snow and Avalanches by the Catalan Geological Institute
- 2007 International workshop on “Numerical Modelling of Hydrodynamics for Water Resources”
- 2007 Course about decision support system of water resources *Aquatool*
- 2006 Summer course “Nature vs. Development in Spain”.

## Publications

### *Conference proceedings*

- Van der Hoek, W., **J.E. Hunink**, P. Vellema, P. Droogers, 2010 Q fever in the Netherlands: the role of local environmental conditions. Submitted to International Journal of Environmental Health Research
- Van der Hoek, W., **J.E. Hunink**, T. Veenstra, P. Droogers, 2010 Q Fever in the Netherlands: the role of local environmental conditions in the largest epidemic ever reported. Proceedings of the 2010 International Conference on Emerging Infectious Diseases, Atlanta.
- A. Pérez-Paricio, **J.E. Hunink**, E. Kupper and J. Raso Quintana, 2010. Estimation of the river conductance coefficient using streambed slope for modeling of regional river-aquifer interaction. XVIII International Conference on Computational Methods in Water Resources, 2010, Barcelona.
- Kupper, E., A. Pérez-Paricio, J. Raso Quintana and **J.E. Hunink**, 2009. Primer Plan Director de Usos de un acuífero aluvial en Cataluña. Jornadas de Ingeniería de Agua, 2009, Madrid.
- Hunink, J.E.**, Bouten, W. and E.E. van Loon, 2007. Use of a nested modeling framework to study multiscale hydrological processes. Numerical Modelling of Hydrodynamics for Water Resources. ISBN 13: 978.0.415.44056.1
- Hunink, J.E.** and J. Raso, 2007. A coupled 1D-2D modeling study of the 1907 flood in the Ebro delta. Numerical Modelling of Hydrodynamics for Water Resources. ISBN 13: 978.0.415.44056.1
- Hunink, J.E.**, Peñas Castejon, J.M., Van Mourik, J. and A. Faz, 2004. Environmental risks associated with wind-erosion promoted by the mobility of heavy metals in the forming of secondary minerals. Book of International Congress on Land Degradation. ISBN 84-95781-42-5

### *Technical reports and other publications*

- Bouma, J., Droogers, P., Sonneveld, M. P. W., Ritsema, C. J., **Hunink, J. E.**, Immerzeel, W. W., and Kauffman, S.: Hydropedological insights when considering catchment classification, Hydrol. Earth Syst. Sci. Discuss., 8, 2145-2173, doi:10.5194/hessd-8-2145-2011, 2011.
- Hunink, J.E.**, T. Veenstra, P. Droogers, W. van der Hoek, 2010. Het belang van lokale omgevingsfactoren voor de verspreiding van Q-koorts bij de mens. Bodem, nummer 4, augustus 2010
- Hunink, J.E.**, T. Veenstra, W. van der Hoek, P. Droogers, 2010. Q fever transmission to humans and local environmental conditions. FutureWater rapport 90. FutureWater, Wageningen.
- Hunink, J.E.**, W.W. Immerzeel, P. Droogers, 2009. Green Water Credits for the Upper Tana Basin, Kenya. Phase II - Pilot Operations: Biophysical assessment using SWAT. Report FutureWater: 84