

Personal data:

Family name: Eekhout
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**Summary:**

Hydrologist specialized in catchment hydrology, soil erosion, river hydraulics and fluvial morphology, with a Doctors' degree (PhD) in environmental science. I have gained experience in field research, hydrological and hydraulic modeling, and data analysis. Part of my PhD research was performed in an interdisciplinary research project, which included researchers (hydrologists, and aquatic and terrestrial ecologists) and practitioners from Dutch water authorities. The results of my research have been published in peer-reviewed journals and have been presented at international conferences. The most relevant results for stream restoration practitioners in the Netherlands have been disseminated in two reports and several popular scientific articles.

My computational experience includes data analysis (R, Matlab and QGIS) and hydrological/hydraulic modeling (SPHY, SOBEK and Delft3D). My fieldwork experience includes morphological surveying, sediment sampling and hydrological monitoring.

Education:

2009 – 2014: Wageningen University, Wageningen, the Netherlands
PhD candidate
2000 – 2008: University of Twente, Enschede, the Netherlands
BSc/MSc Civil Engineering and Management
Specialization: Water Engineering and Management

Work experience:

2015 – present: Postdoctoral researcher, CEBAS-CSIC, Murcia, Spain
2009 – 2014: PhD candidate, Wageningen University, Wageningen, the Netherlands
Funded by STOWA (Foundation for Applied Water Research)
Promotors: Prof.Dr. R. Uijlenhoet & Prof.Dr. P.F.M. Verdonschot
Daily supervisor: Dr. A.J.F. Hoitink
2013: Researcher, Wageningen University, Wageningen, the Netherlands
Funded by STOWA (Foundation for Applied Water Research)

Scientific projects:

- 2017 – present: Juan de la Cierva Formación grant
Funded by Spanish Ministry of Economy, Industry and Competitiveness
- 2015 – 2017: ADAPT
Funded by Spanish Ministry of Science and Innovation (CICYT, National Plan of Science)
Principal investigator: Dr. J. De Vente
- 2010 – 2012: Beekdalbreed hermeanderen (Valley wide stream restoration)
Funded by Agency NL
Principal investigator: Prof.Dr. P.F.M. Verdonshot

Publications:

- Scientific journals:
- J.H.F. de Brouwer, **J.P.C. Eekhout**, A. Besse-Lototskaya A.J.F. Hoitink, C.J.F. Ter Braak & P.F.M. Verdonshot (2017) **Flow thresholds for leaf retention in hydrodynamic wakes downstream of obstacles**, *Ecohydrology*, 10(7): e1883
- J.E. Hunink, J.P.C. Eekhout, J. Vente, S. Contreras, P. Droogers & A. Baille (2017) **Hydrological Modelling Using Satellite-Based Crop Coefficients: A Comparison of Methods at the Basin Scale**, *Remote Sensing*, 9(2): 174
- J.P.C. Eekhout & A.J.F. Hoitink (2015) Chute cutoff as a morphological response to stream reconstruction: The possible role of backwater**, *Water Resources Research*, 51(5): 3339-3352
- J.P.C. Eekhout, A.J.F. Hoitink, J.H.F. de Brouwer & P.F.M. Verdonshot (2015) Morphological assessment of lowland stream restoration in the Netherlands**, *Advances in Water Resources*, 81: 161-171
- J.P.C. Eekhout, R.G.A. Fraaije & A.J.F. Hoitink (2014) Morphodynamic regime change in a reconstructed lowland stream**, *Earth Surface Dynamics*, 2: 279-293
- J.P.C. Eekhout, A.J.F. Hoitink & E. Mosselman (2013), Alternate bar development in a straight sand-bed stream under a declining channel slope**, *Water Resources Research*, 49(12): 8357–8369
- J.P.C. Eekhout, A.J.F. Hoitink & B. Makaske (2013) Historical analysis indicates seepage control on initiation of meandering**, *Earth Surface Processes and Landforms*, 38(8): 888–897
- Conference proceedings: **J.P.C. Eekhout & A.J.F. Hoitink (2012) Field-scale experiment on migrating bar dynamics: preliminary analysis**, In: *River Flow*

2012: *Proceedings of the sixth edition of the international conference on fluvial hydraulics*, 623-627, San Jose, Costa Rica, September 5-7, 2012

J.P.C. Eekhout & A.J.F. Hoitink (2011) Field-scale experiment of migrating bar behavior: preliminary analysis, In: *EUROMECH Colloquium 523, Ecohydraulics: linkages between hydraulics, morphodynamics and ecological processes in rivers*, 207-211, Clermont-Ferrand, France, June 15-17, 2011

Professional publications: **J.P.C. Eekhout & A.J.F. Hoitink (2014) Morfodynamiek van Nederlandse laaglandbeken**, *STOWA report*, 2014-15, pp. 92

J.P.C. Eekhout, A.J.F. Hoitink, E. Mosselman, M. Kits & M. Talsma (2014) Veldexperiment in de Hooge Raam: winst voor beekherstel én wetenschap, *Stromingen*, 2: 5-15

J.P.C. Eekhout, A.J.F. Hoitink, C. Huising & M. Talsma (2014) Morfologische aanpassing na beekherstel – casestudie Lunterse Beek, *H2O (online)*

J.P.C. Eekhout, A.J.F. Hoitink, B. Makaske & M. Talsma (2013) Het Geldernsch – Nierskanaal: hoe een recht kanaal gaat meanderen als gevolg van kwel, *H2O (online)*

Presentations:

International conferences: **J.P.C. Eekhout & J. de Vente (2017) Sustainable Land Management potential for climate change adaptation in Mediterranean environments: a regional scale assessment**, *Soil Erosion Modelling (JRC)*, Ispra, Italy

J.P.C. Eekhout, J.E. Hunink, W. Terink & J. de Vente (2017) Impacts of increased extreme precipitation under future climate change on soil erosion and water availability, *Soil Erosion Modelling (JRC)*, Ispra, Italy

J.P.C. Eekhout, J. De Vente & W. Terink (2016) The impact of climate change and sustainable land management based adaptation on hydrology and soil erosion of a large semiarid catchment, *EGU General Assembly*, Vienna, Austria

J.H.F. de Brouwer, J.P.C. Eekhout (presenter) & P.F.M. Verdonschot (2016) Biological and physical conditions of macroinvertebrates in reference lowland streams, *EGU General Assembly*, Vienna, Austria

J.E. Hunink, J.P.C. Eekhout, J. De Vente, S. Contreras & P. Droogers (2016) Crop coefficients parametrization using remote sensing in basin-scale hydrological modelling, *EGU General Assembly*, Vienna, Austria

J.P.C. Eekhout, A.J.F. Hoitink, J.H.F. de Brouwer & P.F.M. Verdonschot (2014) Morphological assessment of lowland stream restoration in the Netherlands, AGU Fall Meeting, San Francisco, United States

J.P.C. Eekhout, R.G.A. Fraaije & A.J.F. Hoitink (2014) Morphodynamic regime change in a reconstructed lowland stream, EGU General Assembly, Vienna, Austria

J.P.C. Eekhout, A.J.F. Hoitink, B. Makaske & E. Mosselman (2013) Autogenous initiation of meandering of lowland streams, River, Coastal and Estuarine Morphodynamics (RCEM 2013), Santander, Spain

J.P.C. Eekhout & A.J.F. Hoitink (2013) Importance of backwater effects and floodplain heterogeneity in the occurrence of a chute cutoff, River, Coastal and Estuarine Morphodynamics (RCEM 2013), Santander, Spain

J.P.C. Eekhout & A.J.F. Hoitink (2012) Field experiment on alternate bar dynamics, River Flow 2012, San Jose, Costa Rica

J.P.C. Eekhout & A.J.F. Hoitink (2011) Field-scale experiment of migrating bar behavior: preliminary analysis, Euromech Colloquium 523: Ecohydraulics, Clermont-Ferrand, France

J.P.C. Eekhout & A.J.F. Hoitink (2010) Long-term evolution of a morphologically active man-made stream in the Netherlands, AGU Fall Meeting, San Francisco, United States

Symposia & workshops:

J.P.C. Eekhout (2015) Morphological Processes in Lowland Streams, Seminario CEBAS-CSIC, Murcia, Spain

J.P.C. Eekhout & A.J.F. Hoitink (2013) Importance of backwater effects and floodplain heterogeneity in the occurrence of a chute cutoff, NCR-days 2013, Delft, the Netherlands

J.P.C. Eekhout (2013) Sturen op (gedempte) dynamiek, STOWA Deltaproof, Amersfoort, the Netherlands (in Dutch)

J.P.C. Eekhout & A.J.F. Hoitink (2012) Stabiliteitsdiagram van laaglandbeken, Community of Practice Hermeanderen, Wageningen, the Netherlands (in Dutch)

J.P.C. Eekhout & A.J.F. Hoitink (2012) Eco-hydraulica van natuurlijke laaglandbeken, Werkgroep Ecologisch Waterbeheer, Harderwijk, the Netherlands (in Dutch)

J.P.C. Eekhout & A.J.F. Hoitink (2012) Field-scale experiment of alternating bar behavior, Mini-workshop on alternate bars and braid bars, Delft, the Netherlands

J.P.C. Eekhout & A.J.F. Hoitink (2011) Long-term evolution of a morphologically active man-made channel in the Netherlands, *SENSE Symposium*, Wageningen, the Netherlands

J.P.C. Eekhout & A.J.F. Hoitink (2010) Beekdalbreed hermeanderen, *Community of Practice Hermeanderen*, Tilburg, the Netherlands (in Dutch)

J.P.C. Eekhout & A.J.F. Hoitink (2009) Morfologische aspecten beekherstel, *Community of Practice Hermeanderen*, Venlo, the Netherlands (in Dutch)

Secondary activities:

Courses:

River Restoration: Fluvial Geomorphic & Ecological Tools

(June 7-11, 2010)

Le Institut Beaumont, Lyon, France

Main lecturer: Prof.Dr. G.M. Kondolf (Berkeley University of California)

Workshop I-RIC (March 16-18, 2011)

UNESCO-IHE, Delft, the Netherlands

Main lecturer: Dr. J.M. Nelson (USGS)

Techniques for Writing a Scientific Paper (October 24-25, 2011)

Wageningen Business School, Wageningen, the Netherlands

Main lecturer: Prof.Dr. M. Grossman (University of Illinois)

Sediment Transport and Associated Fluvial Processes (October 15-16, 2012)

IDAEA-CSIC, Barcelona, Spain

Main lecturer: Dr. R.J. Batalla (University of Lleida)

EGU Summer School: Understanding Earth-Surface Processes in the Alpine Environment from High Resolution Topography

(July 28-August 4, 2013)

Centre of studies of Alpine Environment, San Vito di Cadore, Italy

Main lecturer: Dr. P. Tarolli (University of Padova)

Educational activities:

Supervising MSc-thesis S. Versluis (2013) **Laboratory experiments on the development of leaf habitats in lowland streams**, Wageningen University, Wageningen, the Netherlands

Supervising MSc-thesis M.J. Sommeijer (2012) **Hydraulic geometry of morphological undisturbed lowland streams**, Wageningen University, Wageningen, the Netherlands

Supervising BSc-thesis T.J. Geertsema (2011) **Relatie tussen sinuositeit en valleihelling van Nederlandse beken**,

Wageningen University, Wageningen, the Netherlands

Supervising BSc-thesis W. Huijben (2009) **Rol van morfologische parameters bij beekherstelprojecten**, Wageningen University, Wageningen, the Netherlands

Other activities: Organizing SENSE Symposium (2010) **Land-Water-Atmosphere Interactions**, March 9, 2010, Wageningen University, Wageningen, the Netherlands

Other skills:

Languages: Dutch (mother tongue)
English (full professional proficiency)
Spanish (level B1, Escuela Oficial de Idiomas de Murcia)

Computer knowledge: Word processing: Microsoft Office (advanced) and LaTeX (advanced)
Programming: R (advanced), Matlab (advanced) and Python (basic)
Hydrological models: SPHY (advanced)
Hydrodynamic models: SOBEK (advanced) and Delft3D (advanced)
GIS software: ArcGIS (basic) and QGIS (basic)
Web development (basic knowledge): HTML5, CSS3, JavaScript, jQuery, Bootstrap, WordPress, PHP, MySQL

Fieldwork experience: Ground-based morphological surveys (Leica GPS 1200+ & Sokkia SET2B Total station)
Water level measurements (pressure sensors)
Flow velocity measurements (RD Instruments StreamPro ADCP)
Sediment sampling & analysis (Piston type sediment sampler & sediment sieving)