
CURRICULUM VITAE Marc F.P. Bierkens

Last update: April 7, 2017

Personal information

Family name:	Bierkens
First names:	Marinus Franciscus Petrus
Profession:	Hydrologist
Date of birth:	November 1 1965
Nationality:	Netherlands
Civil status:	Married, three children

Employer

Name:	Department of Physical Geography, Utrecht University
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Education

Institution		Wageningen University	
From	To	Degree	Major subjects
1984	1990	MSc	Stochastic hydrology, catchment hydrology, Geohydrology
Institution		Utrecht University	
From	To	Degree	Major subjects
1990	1994	PhD	Stochastic hydrology, geohydrology, Geostatistics

Languages

Dutch	Excellent
English	Excellent
French	Slight
German	Fair/slight

Key qualifications

- Research experience in stochastic hydrology, geostatistics, statistical methods and monitoring, land surface hydrology, geohydrology, soil physics, ecohydrology, water management, global scale hydrology and water resources, hydrology and climate.
- Experience in consulting water managers, soil scientists, hydrologists and geographers on issues of hydrology, geostatistics, uncertainty analysis, upscaling and downscaling
- Experience in acquisition and management of research projects and consultancy projects
- Experience in management of research teams and departments

Training received (relevant to hydrology)

At Wageningen University:

- Soil science and geology
- Soil physics
- Surface water hydrology (catchment hydrology and rainfall-runoff modelling)
- Hydrometrics
- Fluid mechanics
- Flood routing (Saint-Venant equations)
- Stochastic hydrology en hydrological statistics
- Agrohydrology and water management
- Geohydrology and groundwater modelling
- Micrometeorology
- Subsidiary topics in mathematics: calculus, statistics, ordinary and partial differential equations, numerical mathematics, informatics and programming (Fortran, Pascal), simulation techniques.

Postgraduate:

- Courses in statistics for researchers
- GIS courses
- Courses in groundwater flow and transport

Teaching experience

- Course on Stochastic Hydrology
- Course on Hydrology and Climate
- Course on Unsaturated Zone Hydrology
- Course on Climate systems and adaptation
- Professional Lectures on geostatistics for researchers (Wageningen)
- Professional lectures on error analysis in water balance calculations (PHLO Wageningen)
- Student lectures on hydrology for environmental science (Utrecht)
- Student field work Quaternary fluvial geology (Utrecht)
- Student lectures on hydrology for engineers (Davis, CA USA)
- Student lectures in Physical Hydrology (Utrecht)

Experience record

July 1988-April 1989	Research Assistant, Department of Land, Air and Water Resources, University of California at Davis (July 1988 - April 1989)
July 1989 - December 1989	Internship at TNO Institute of Applied Geoscience, Delft, Netherlands
January 1990 - July 1994	Research Assistant, Department of Physical Geography, Utrecht University, Netherlands Responsibilities: research (including field work), teaching a course in hydrology, assisting a student field work in Quaternary fluvial geology
July 1994 – July 2002	Senior Researcher, Alterra, Wageningen University and Research Centre, Wageningen, Netherlands. Responsibilities: Consultancy and collaborative work on the application of stochastic theory and geostatistical methods in hydrology, soil science, water management and natural resources inventory and monitoring. Management of research and consultancy projects
November 2000 - December 2001	team leader of team Geo-Information, Statistics and Applications. Responsibilities: Resource planning (people and workload), acquisition, human resource management (result and development)
July 2002 – Present	Professor of Geographic Hydrology Utrecht University, Utrecht, Netherlands (0.8). Senior Hydrologist Deltares Netherlands (0.2)
March 2009 - April 2015	Head of department Physical Geography Utrecht University
May 2015 – present	Coordinator Water, Climate and Ecosystems of UU-wide theme Sustainability

Memberships, additional experience and activities

- Secretary National Study Group on the Application of Statistics in the Earth Sciences (LASSA) (1994-1998), chairman (2001-2003)
- Membership Netherlands Hydrological Society, European Geophysical Union (programming committee on groundwater 2002-2007), American Geophysical Union, International Association of Hydrological Sciences (Vice-president of the International Committee on Ground Water 2001-2003).
- Member of Science Advisory Board of Geoenv 1997 (Valencia), accuracy 2000 (Amsterdam), HydroEco 2006 (Karlsbad), ModelCARE 2007 (2007), HydroPredict 2008 (Pargue), HydroEco 2009 (Karlsbad), 8th Leonardo Conference 2016 (Spain).
- Editorial boards: "Journal of Hydrology" (2003-2010), Hydrology and Earth System Science (2005-2007), Geoderma (since 2007), Water Resources Research (since 2009)
- Reviewing papers for international journals, e.g. Water Resources Research, Journal of Hydrology, Hydrology and Earth System Science, Groundwater, Stochastic Environmental Research and Risk Assessment, Mathematical Geology, Geoderma, European Journal of Soil Science, Catena, Engineering Geology, Environmental and Ecological Statistics, Journal of Environmental Quality, Environmetrics, Journal of Hydrometeorology, Geophysical Research Letters, Nature Geoscience, Nature, Earth System Dynamics, PNAS, Nature, Science.
- Reviewing research proposals for NWO-ALW/STW, the United States National Science Foundation (NSF) and the UK National Environmental Research Council (NERC).
- Advisor (co-promotor) on the following finished PhD projects by Martin Knotters (PhD at Wageningen University, 2001), Derk Jan Karssenbergh (PhD at Utrecht University, november 2002), Cees Vink (PhD at Utrecht University, juni 2006), Daniel Mourad (January 2008), Hanneke Schuurmans (November 2008), Ate Visser (May 2009; cum laude), Arnaut van Loon (March 2010), Reinder Brolsma (June, 2010), Joachim Rozenmeijer (October, 2011), Frederiek Sperna-Weiland (December, 2011), Jos von Asmuth (March, 2012), Edwin Sutanudjaja (2012), Yoshihide Wada (2013; cum laude), Oliver Schmitz (2014), Ekkamol Vannamatee (2014), Brian Dermody (2014), Niko Wanders (2015), Yasmijn van der Knaap (2016, VU), Inge de Graaf (2016), Arthur Lutz (2016)
- Advisor (promotor) on ongoing PhD projects: Sibren Loos, Naze-Candogan Yossef, Aris Lourens, Inge de Graaf, Arthur Lutz, Sebastian Huizer, Lucie Babel, Patricia Lopez-Lopez, Jannis Hoch, Wiecher Bakx, Hung Phan, Daniel Zamrsky, Joeri van Engelen, Jude King.
- Member of promotion (PhD) committee of Joost Herweijer (Free University, Amsterdam, 1997) and Hans Gehrels (Free University, Amsterdam, 1999), Rens van Beek (Utrecht University, May 2002), Rutger Dankers (Utrecht University, September, 2002), Sandra van der Linden (Utrecht University, December 2002), Patrick Bogaert (Free University, Amsterdam, March 18, 2003), Marek Gielczweski (Utrecht University), Kim Cohen (Utrecht University), Pieter-Jan Helvoort (Utrecht University, September 2003), Elmer van de Berg (Free University of Amsterdam), Lies Peters (Wageningen University), Wilbert Berendrecht (Delft University of Technology, 2004), Job Spijker (Utrecht University, 2005), Marc Vissers (Utrecht University, 2006), Peter Vermeulen (Delft University of Technology, 2006), Mirko Ballarini (Delft University of Technology, 2006), Nusin Yenigül (Delft University of Technology, 2006), Arno Hilberts (Wageningen University, 2006), Christiaan van der Tol (Vrije Universiteit, 2007), Guping Zhang (Delft University of Technology, 2007), Egon Dumont (Wageningen University, 2007), Dinand Alkema (Utrecht University, 2007), Marc Gouw (Utrecht University, 2007), Wiebe Borren (Utrecht University, 2007), Ryan Teuling (Wageningen University, 2007), Arjen Terwisscha van Scheltinga (UU/IMAU, 2007), Jef Neal (external examiner at VIVA; University of Southampton, School of Geography, 2008), Walter Immerzeel (Utrecht University, 2008), Justin Sheffield (Wageningen University/Princeton University, 2008), Kaka Shahedi (Wageningen University, 2008), Jan Wesseling (Wageningen University, 2009), Shakeel Hasan (Wageningen University, 2009), Maarten Eppinga (Utrecht University, 2009), Julius Sumihar (Delft University of Technology, 2009), Roxanne Petrescu (Vrije Universiteit Amsterdam, 2009), Robert leander (Utrecht University, 2009), Aart Overeem (Wageningen University, 2009), Mxolisi Shongwe (Utrecht University, 2010), Ingwer Bos (Utrecht University, 2010), Ouyang Wei (ITC Enschede, 2011), Lukas Gudmundsson (University of Oslo, Norway, 2011), Berny Bisselink (Vrije Universiteit Amsterdam, 2012), Yijian Zeng (ITC Technical University Twente, 2012), Gerben de

- Jager (Technical University Delft, 2012), Floor van Hilst (Utrecht University, 2012), Claudia Marcela Agudelo Vera, Wageningen University, 2012), Maria C. Loinaz (Technical University of Denmark, Lynby, 2012), Hugo de Boer (Utrecht University, 2012), Hans de Moel (VU University, Amsterdam, 2012), Dominika Krzeminska (Technical University Delft, 2012), Aimee Slangen (Utrecht University, 2012), Michelle van Vliet (Wageningen University, 2012), Jan Declair (Utrecht University, 2013), Jan Lenaerts (Utrecht University, 2013), Remco van Beek (Wageningen University, 2013), Perry de Loue (Vrije Universiteit, 2013); Jan van Angelen (Universiteit Utrecht, 2013), Wietse van de Lageweg (Utrecht University, 2013), Hylke Beck (Vrije Universiteit Amsterdam, 2014), Poolad Karimi (TU Delft, UNESCO-IHE, 2014), Stefan Ligtenberg (Utrecht, 2014), Olda Rakovec (Wageningen, 2014), Gijbert Cirkel (Wageningen, 2014), Marjolein van Huijgevoort (Wageningen, 2014), Chandra Prasad Ghimere (VU University, 2014), Arthur Beusen (Utrecht University, 2015), Christiana Photiadou (Utrecht University, 2018), Hangkai Goa (TU Delft, 2015), Joost Delsman (VU University, 2015), Patricia Trambauer (TU Delft, 2015), Alain Pascal Frances (Twente University, 2015), Markus Enenkel (TU Vienna, Austria, 2015), Wouter Marra (Utrecht University, 2015), Samuel Sutanto (Utrecht University, 2015), Tanja Euser-deBoer (TU Delft, 2017), Koen Hilgersom (TU Delft, 2017).
- Member of Appointment committees for the following professorship positions: Professor of Hydrogeology (Free University of Amsterdam, 2004), Professor of Hydrogeology (Utrecht University, 2003), Professor of Agrohydrology, Soil Physics and groundwater management (Wageningen University, 2005), Professor of Hydrology (UNESCO-IHE, 2005), Professor of Environmental Science (Utrecht University, 2007; chairman), Professor of Water Quality Management (Utrecht University, 2011), Professor of Nutrient Transport from Land to Sea (Utrecht, 2011), Professor of Integrated Assessment Modelling of Global Environmental Change (Utrecht, 2011), Professor of Palaeophysiology of Plants in the Context of Environmental Change (Utrecht, 2012), Professor Water Use and Risk Mitigation (Utrecht, 2012), Professor of Process sedimentology and River Morphology (Utrecht, 2014), Professor of Water and Climate (VU University Amsterdam), Professor of Chemical Hydrogeology (TU Delft), Professor of Water Systems and Global Change (Wageningen University), Professor of Computational Hydrogeology (TU Delft).
 - Member of the Foresight committee on hydrological research in the Netherlands established by the Royal Netherlands Academy of Arts and Sciences (KNAW). We wrote the report "Turning the Water Wheel Inside Out" Foresight Study on Hydrological Science in the Netherlands". Based on its recommendations "The Boussinesq Centre for Hydrological Research " has been established. Chairman of its steering group (2007-2011)
 - Member of the Scientific Counsel of ITC - International Institute for Geo-Information Science and Earth Observation (2005-2010);
 - Chairman of the Programming and Reviewing Committee of the Netherlands Science Foundation (NWO) research program "Water" (February 2003-2010).
 - Co-ordinator of the Hydr(geo)logy theme for the 5-year research program of the Utrecht Centre for Geosciences (UCG) (2002-2007).
 - Member of the local organising committee of ModelCARE 2005, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling held June 6-9 2005 in The Hague (<http://modelcare2005.nitg.tno.nl>); chairmain of the scientific advisory board.
 - Chief organiser of the summer course "Climate and the Hydrological Cycle", jointly organised with Wageningen University and Vrije Universiteit Amsterdam, to be held July 4 – July 15 in Utrecht (<http://hydroclimate.geog.uu.nl>).
 - EGU General Assembly Vienna, April 2004 (Session organizer and Session Chair).
 - Member of the NWO-wide Thematic Committee "Duurzame Aarde" (Sustainable Earth), formulating starting documents for coming research programs. Member of the Partnership on Sustainability (established in 2008).
 - Member of open NWO-ALW open competition committee (several times) and VICI-committee 2007-2008.
 - Member of the Scientific Advisory Board of ModelCARE 2007, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling, held at Copenhagen, September 9-13 2007.
 - Chairman of the Jury of the 2007-2009 Hydrology prize awarded by the Netherland Hydrology Society (NHV).
 - Chairman of the Netherlands Hydrology Society (April 2012-present).

- Member of the Science and Technology Advisory Committee of the EU Joint Programming Initiative Water Challenges in a Changing World (JPI Water).
- Member of the Scientific Evaluation panel for the Dutch Delta Program (2013, 2014).
- Member of Program Committee for the TKI Deltatechnology Topsector Water (2014-present)
- Member of the programming team of NKWK – National Program on Water and Climate (2015-present).
- Chief organizer of the workshop “Hyper-resolution global hydrological modelling: the next step” and organizing the associated network organization HyperHydro.org.
- Chairman of the programming committee of the NWO-ALW program New Delta (2014).
- Member of the Jury for the AGU Langbein Lecture (2014-present).

Invited or keynote speaker

- Workshop called “Testable stochastic features of subsurface structures, flow, and transport” held at Monte Verita, Ascona (Switzerland) on October 24-29, 1999. Invited lecture called “Space-time modelling of water table depth using a regionalized time series model and the Kalman filter”.
- Workshop called “Environmental flows: are there key scales for solute and pollutant transport?” held at Westpark Centre, Dundee (Scotland) on March 26-27, 2001. Keynote lecture called “Appropriate scales and appropriate upscaling and downscaling methods for environmental research”.
- Workshop called “Integration of Scales in Landscape Ecology” held on June 13, 2002 at Utrecht University. Invited Lecture called “Appropriate scales and appropriate upscaling and downscaling methods for landscape ecological research”.
- “Toekomstbespiegelingen over waterbeheer in 2030”. Plenaire lezing bij het symposium “Zicht op Water” bij de Provincie Noord-Brabant ter ere van het opleveren van de GD-kaart.
- Keynote lecture “Methods that span the soil, water and agricultural interface”, given on September 12, 2003 at the fifth international conference on Pedometrics in Reading, England.
- Speaker at the first Boussinesq Lecture given by Rafael Bras (MIT) at the Royal Netherlands Academy of Arts and Sciences (KNAW), lecture entitled: “Spatio-temporal dynamics of soil, water and vegetation in groundwater dependent ecosystems”, October 2005.
- Keynote Lecture “Spatio-temporal dynamics of soil, water and vegetation in groundwater dependent ecosystems”, given on September 2006 at HydroEco ‘2006 – International Multidisciplinary Conference on Hydrology and Ecology, the Groundwater/Ecology connection at Karlovy Vary, Czech Republic.
- Invited speaker at the mini-symposium “Excursions into ecohydrology” organised by UNESCO-IHE and the Boussinesq Centre for Hydrology on the occasion of the Darcy Lecture 2007 given by Jim Butler (Kansas Geological Survey) to be held June 1 2007.
- Invited lecture entitled “Land surface-atmosphere interactions featuring the role of vegetation and groundwater” to be held at ETH Zurich on May 25, 2007.
- Keynote Lecture entitled “Real-time forecasting and data-assimilation in groundwater modelling” held at ModelCARE 2007, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling, Copenhagen, September 9-13 2007.
- Keynote Lecture entitled “Components of a real-time nowcasting and forecasting system for distributed hydrological models” held at geoENV 2008, the 7th International Conference on Geostatistics for Environmental Applications, Southampton (K), September 8-10, 2008.
- Keynote Lecture “The effect of climate change on groundwater dependent temperate forest ecosystems”, given in april 2009 at HydroEco ‘2009 – International Multidisciplinary Conference on Hydrology and Ecology connection in Vienna, Austria.
- Keynote lecture at 2014 Wetsus internal conference entitled: Water Scarcity: Global challenges and local solutions
- Keynote Lecture “Global Hydrology: state, trends and directions”, given at the 3rd Conference on Modelling Hydrology, Climate and Land Surface Processes, September 2015, Lillehammer, Norway.
- Invited Lecture entitled “Groundwater resources and environmental change” given at the Side Event on Isotope Hydrology at the 59th session of the IAEA General Conference, September 17 2015 , IAEA Headquarters, Vienna, Austria.

- Invited Lecture entitled “Modelling Global Groundwater Resources” given at the Water Event “Is my country running out of groundwater? New frontiers in groundwater assessments” organized by the Global water Practice at the World Bank Group, October 29 2015, Washington DC, USA.
- Invited Lectures at EGU general assembly 2014 (1), AGU general assembly 2014 (2), AGU general assembly 2015 (2).

Awards

- ISSS Working Group on Pedometrics Best Paper Award of 1994 for the paper “Application of indicator simulation to modelling the lithological properties of a complex confining layer” published in *Geoderma* 62.
- The hydrology Prize for the years 1994 to 1997 of the Netherlands Hydrological Society for the best publication entitled “Modeling hydraulic conductivity of a complex confining layer at various spatial scales” published in *Water Resources Research* 32(8).
- IUSS committee on Pedometrics best paper award for the year 2004 for the paper entitled: Finke, P.A., Brus, D.J., Bierkens, M.F.P., Hoogland, T. and Knotters, M., 2004. Mapping groundwater dynamics using multiple sources of exhaustive high resolution data. *Geoderma* 123(1-2), 23-39.
- Environmental Modelling & Software Best paper Award 2010: Software and Decision Support for the paper entitled “A software framework for construction of process-based stochastic spatio-temporal models and data-assimilation” by D. Karssenbergh, O Schmitz, P. Salamon, K. de Jong and M.F.P. Bierkens.
- EGU Union Keynote entitled “Water of the Earth” as part of the Union Keynote series “Faces of the Earth”. April 29, 2014: <http://client.cntv.at/EGU2014/?play=38>
- Fellow of the American Geophysical Union (2016)

Funded Research projects (funding source/role/year started):

- PhD: On-line DA and ensemble forecasting groundwater and soil moisture (TNO/PI/2003): 180 k€
- PhD: Groundwater and climate (NWO-ALW/PI/2004): 200 k€
- PhD; AQUATERRA (European Union FP6/WP leader/2004): 220 k€
- Project Summerschool Climate and the hydrological Cycle (National Funding/project leader/2005): 40 k€
- PhD DYNAQUAL – Dynamics of groundwater and surface water quality (TNO/promotor/2006): 180 k€
- Small project: ESA Global Mass Distribution and Transport in the Earth System (ESA/collaborator/2007): 60 k€
- Postdoc: thermo-dynamical conspiracy of the Himalaya’s (NWO Casimir programme/advisor/2008) 100 k€
- PhD: Multi-satellite and multi-sensor application for large-scale groundwater assessment (NWO-GO/PI/2008): 200 k€
- PhD: Facility for global assessment of hydrological effects of climate change (Deltares/PI/2008): 180 k€
- PhD: Global seasonal forecasting of River discharge (Deltares/PI/2008): 180 k€
- PhD: Modelling past and future global water stress (UU F&M/PI/2009): 180 k€
- PhD: Climate and vegetation shifts during Roman Classical period (UU F&M/promotor/2009): 90 k€
- PhD: Limits to global groundwater consumption (NWO-ALW/PI/2011): 220 k€
- Postdoc: Quantifying the Water Tower of the Third Pole (NWO VENI-scheme/advisor/2011): 250 k€
- Postdoc: GLOWASIS - (European Union FP7/WP leader/2011): 120 k€
- PhD: Monitoring Strategy for Hydrogeological parameters (TNO/promoter/2011): 240 k€.
- Postdoc: Water2Invest.com (European Institute of Technology Climate KIC/PI/2012): 190 k k€ (projectleider van totaal project 470 k€)
- Postdoc: Data-Intensive Modeling of the Global Water Cycle: Bringing the 4th Paradigm to Hydrology (NWO high-performance computing programme/advisor/2012): 135 k€
- Small projects for performing runs for ISI-MIP fast track (20 k€) and Water Futures and Solution (IIASA/UNESCO: 30 k€).
- PhD: Climate Cascades – Integrated catchment model and fate of pathogens and

- heavy metals (RIVM): 260 k€.
- PhD: The effect of mega-nourishments on freshwater reserves, salt water intrusion and fresh water outflow (NWO-STW Perspectieven project NatureCoast/PI and WP leader/2013): 250 k€.
 - PhD1: Regional downscaling of global water resources models. Part of EU project Earth₂Observe (EU FP7/promotor/2014); PhD2: Global hydrology and water resources modeling and re-analysis. Part of EU project Earth₂Observe (EU FP7/PI/2014): 500 k€.
 - Postdoc: Past and future impact of anthropogenic changes to the water cycle on regional and global climate (UU Sustainability/PI/2014): 150 k€
 - Small project: Pilot Glob-wide water availability analysis around Shell assets (Shell global solutions/PI/2014): 60 k€.
 - PhD: Global high-resolution database of current and future river flood hazard (EIT Climate KIC/PI/2014): 270 k€
 - PhD: Fresh groundwater reserves in 40 major deltas under global change (NWO–The New Delta/PI/2015): 250 k€
 - PhD1: Rapid regional mapping of salt-fresh water distributions; PhD 2: Rapid modelling and scenarios for strategic policy development (NWO/STW Perspectieven project Water Nexus/PI and WP leader/2015): 630 k€
 - Postdoc: Global flood analyser (World Resources Institute/PI/2014): 120 k€
 - Postdoc: Groundwater risk and update Aqueduct Atlas (World Resources Institute/PI/2015): 65 k€.
- Total: 5,6 M€

Web resources research group

www.earthsurfacehydrology.nl

www.globalhydrology.nl

Climate services supported by our group's work

Global flood analyser (WRI Aqueduct): <http://floods.wri.org>

Global streamflow forecasting: <http://forecast.ewatercycle.org/>

Global water scarcity analysis and investment: <http://water2invest.envisim.com/>

Global water cycle integrator: <https://wci.earth2observe.eu/portal/>

Publications (Web of science: H=35; Scopus: H = 36; Google Scholar: H=50)

PhD thesis

Bierkens, M.F.P., 1994 *Complex confining layers: a stochastic analysis of hydraulic properties at various scales*. Netherlands Geographical Studies 184, Utrecht University, 263 pp.

Books

1. Bierkens, M.F.P., P.A. Finke and P. de Willigen, 2000. *Upscaling and downscaling methods for environmental research*. Kluwer Academic Publishers, Dordrecht, 190 pp.
2. Bierkens, M.F.P., J.C. Gehrels and K. Kovar (Editors), 2006. *Calibration and Reliability in Groundwater Modelling: From Uncertainty to Decision Making*. Proceedings of ModelCARE 2005, the Hague. IAHS Publication 304, 316 pp.
3. De Gruijter, J.J., D.J. Brus, M.F.P. Bierkens and M. Knotters, 2006. *Sampling for Natural Resources Monitoring*. Springer, Berlin, 332 pp.
4. Bierkens, M.F.P., A.J. Dolman and P.A. Troch (Editors), 2009. *Climate and the Hydrological Cycle*. IAHS Special Publication 8. IAHS Press UK, 343 pp.
5. NHV Werkgroep Verdamping. Verdamping in de Hydrologie. NHV special 8. Nederlandse Hydrologische Vereniging en STOWA, 204 pp. (In Dutch: Evaporation and Hydrology: special Dutch Hydrological Society; authorship: chapter 2 Evaporation processes, chapter 3 Calculation of evaporation, chapter 6 Remote sensing and evaporation).

Book Chapter

Geer, F. C. van, M. F. P. Bierkens and H. P. Broers, 2008. *Groundwater monitoring strategies*. In: Encyclopaedia of Hydrological Sciences. Hsa316.

Inaugural Lecture

Bierkens, M.F.P., 2003. Het Water en de Leer. Inaugurele rede uitgesproken op 5 maart 2003 bij de aanvaarding van het ambt van Hoogleraar "Geografische Hydrologie" aan de Universiteit Utrecht. Faculteit Ruimtelijke Wetenschappen, Utrecht (ISBN 90-6266-211-0).

International journals subject to peer review

1. Bierkens, M.F.P. and C.E. Puente, 1990. Analytically derived runoff models based on rainfall point processes. *Water Resources Research* 26(11), 2653-2659.
2. Bierkens, M.F.P. and P.A. Burrough, 1993. The indicator approach to categorical soil data; I. Theory. *Journal of Soil Science* 44, 361-368.
3. Bierkens, M.F.P. and P.A. Burrough, 1993. The indicator approach to categorical soil data; II. Application to mapping and land use suitability analysis. *Journal of Soil Science* 44, 369-381.
4. Bierkens, M.F.P. and H.J.T. Weerts, 1994. Application of indicator simulation to modelling the lithological properties of a complex confining layer. *Geoderma* 62, 265-284.
5. Bierkens, M.F.P. and H.J.T. Weerts, 1994. Block hydraulic conductivity of cross-bedded fluvial sediments. *Water Resources Research* 30(10), 2665-2678.
6. Bierkens, M.F.P., 1996. Modeling hydraulic conductivity of a complex confining layer at various spatial scales. *Water Resources Research* 32(8), 2369-2382.
7. Bierkens, M.F.P. and J.W.J. Van der Gaast, 1998. Upscaling hydraulic conductivity: theory and examples from geohydrological studies. *Nutrient Cycling in Agroecosystems* 50, 193-207.
8. Bierkens, M.F.P., 1998. Modeling water table fluctuations by means of a stochastic differential equation. *Water Resources Research* 34(10), 2485-2499.
9. Bierkens, M.F.P., M. Knotters and F.C. van Geer, 1999. Calibration of transfer-function noise models to sparsely or irregularly observed time series. *Water Resources Research* 35(6), 1741-1550.
10. Bierkens, M.F.P., P.J.T. Van Bakel and J.G. Wesseling, 1999. Comparison of two modes of surface water control using a soil water model and surface elevation data. *Geoderma* 89, 149-175.
11. Bierkens, M.F.P., 2001. Spatio-temporal modelling of the soil water balance using a stochastic model and soil profile descriptions. *Geoderma* 103, 27-50.

12. Bierkens, M.F.P., M. Knotters and T. Hoogland, 2001. Space-time modelling of water table depth using a regionalized time series model and the Kalman filter. *Water Resources Research* 37(5), 1277-1290.
13. Bierkens, M.F.P., 2005. Designing a monitoring network for detecting groundwater pollution with stochastic simulation and a cost model. *Stochastic Environmental Research and Risk Assessment*. DOI: 10.1007/s00477-005-0025-2.
14. Bierkens, M.F.P. and C.B.M. te Stroet, 2006. Modelling non-linear water table dynamics and specific discharge through landscape analysis. *Journal of Hydrology* 332, 412-426.
15. Bierkens, M.F.P. and B.J.J.M. van den Hurk, 2007. Groundwater convergence as a possible mechanism for multi-year persistence in rainfall. *Geophysical Research Letters* 34 L02402, doi:10.1029/2006GL028396.
16. Bierkens, M.F.P. and L.P. van Beek, 2009. Seasonal Predictability of European Discharge: NAO and hydrological response time. *Journal of Hydrometeorology* 10, 953-968. DOI: 10.1175/2009JHM1034.1
17. Heuvelink, G.B.M. and M.F.P. Bierkens, 1992. Combining soil maps with interpolations from point observations to predict quantitative soil properties. *Geoderma* 55, 1-15.
18. Weerts, H.J.T. and M.F.P. Bierkens, 1993. Geostatistical analysis of overbank deposits of anastomosing and meandering fluvial systems; Rhine-Meuse delta, the Netherlands. *Sedimentary Geology* 85, 221-232.
19. Puente, C.E., M.F.P. Bierkens, M.A. Diaz-Granados, P.E. Dik and M.M. López, 1993. Practical use of analytically derived runoff models based on rainfall point processes. *Water Resources Research* 29(10), 3551-3560.
20. Törnqvist, T.E. and M.F.P. Bierkens, 1994. How smooth should curves be for calibration of radiocarbon ages? *Radiocarbon* 36(1), 11-26.
21. Kim, C.P. and M.F.P. Bierkens, 1995. Comment on "A formula for computation of time-varying recharge of groundwater" by N Su, 1994, *Journal of Hydrology* 160, pp. 123-135. *Journal of Hydrology* 171, 191-193.
22. Van der Perk, M. and M.F.P. Bierkens, 1997. The identifiability of parameters in a water quality model of the Biebzra river, Poland. *Journal of Hydrology* 200, 307-322.
23. Knotters, M. and M.F.P. Bierkens, 1999. Physical basis of time series models for water table depths. *Water Resources Research* 36(1), 181-188.
24. Knotters, M. and M.F.P. Bierkens, 2001. Predicting water table depth in space and time using a regionalised time series model. *Geoderma* 103, 51-77.
25. Knotters, M. and M.F.P. Bierkens, 2001. Accuracy of spatio-temporal RARX model predictions of water table depth. *Stochastic Environmental Research and Risk Assessment* 16(2), 112-126.
26. Von Asmuth, J.R., M. F. P. Bierkens & C. Maas, 2002. Transfer function noise modeling in continuous time using predefined impulse response functions. *Water Resources Research* 38(12), 1287, doi:10.1029/2001WR001135..
27. Schuurmans, J.M. , P.A. Troch, A.A. Veldhuizen, W.G.M. Bastiaanssen and M.F.P. Bierkens, 2003. Assimilation of remotely sensed latent heat flux in a distributed hydrological model. *Advances in Water Resources* 26, 151-159.
28. Rietkerk, M., S.C. Dekker, M.J. Wassen, A.W.M. Verkroost and M.F.P. Bierkens, 2004. A putative mechanism for Bog Patterning. *The American Naturalist* 163(5), 699-708.
29. Finke, P.A., Brus, D.J., Bierkens, M.F.P., Hoogland, T. and Knotters, M., 2004. Mapping groundwater dynamics using multiple sources of exhaustive high resolution data. *Geoderma* 123(1-2), 23-39.
30. Weerts, H.J.T., W.E. Westerhoff, P. Cleveringa, M.F.P. Bierkens, J.G. Veldkamp and K.F. Rijdsdijk, 2005. Geological mapping of the Netherlands, a 21st century perspective. *Quaternary International* 133-134, 159-178.
31. Von Asmuth, J.R. and M. F. P. Bierkens, 2005. Modeling irregularly observed residual series as a continuous stochastic process. *Water Resources Research* 41, W12404, doi:10.1029/2004WR003726.
32. Visser, A., R. Stuurman and M.F.P. Bierkens, 2006. Real-time forecasting of water table depth and soil moisture profiles. *Advances in Water Resources* 29, 692-706.
33. Dekker, S.C., M. Rietkerk and M.F.P. Bierkens, 2007. Coupling microscale vegetation-soil water and macroscale vegetation-precipitation feedbacks in semi-arid ecosystems. *Global Change Biology* 13, 671-678, doi: 10.1111/j.1365-2486.2007.01327.x.
34. Brolsma, R.J. And M.F.P. Bierkens, 2007. Groundwater-soil water-vegetation dynamics in a temperate forest along a slope. *Water Resources Research* 43, W0141, doi:10.1029/2005WR004696.

35. Schuurmans, J.M. and M.F.P. Bierkens, 2007. Effect of spatial distribution of daily rainfall on interior catchment response of a distributed hydrological model. *Hydrology and Earth System Sciences* 11(2), 677-693.
36. Schuurmans, J.M., M.F.P. Bierkens, E.J. Pebesma and R. Uijlenhoet, 2007. Automatic prediction of high-resolution daily rainfall fields for multiple extents: the potential of operational radar. *Journal of Hydrometeorology* 8, 1204-1224.
37. Visser, A., H.P. Broers, B. van der Grift and M.F.P. Bierkens, 2007. Demonstrating trend reversal of groundwater quality in relation to time of recharge determined by $^3\text{H}/^3\text{He}$. *Environmental Pollution* 148(3), 797-807.
38. Lam, A.H., M.F.P. Bierkens and B.J.J.M. van den Hurk, 2007. Global patterns of relations between soil moisture and rainfall occurrence in ERA-40. *Journal of Geophysical Research* 112, D18101, doi:10.1029/2007JD008701.
39. Visser, A., H.P. Broers and M.F.P. Bierkens, 2007. $^3\text{H}/^3\text{He}$ dating of groundwater degassed by denitrification. *Water Resources Research* 43, W10434, doi:10.1029/2006WR005847.
40. Immerzeel, W.W., P. Droogers, S.M. de Jong, M.F.P. Bierkens, 2008. Large-scale monitoring of snow cover and runoff simulation in Himalayan river basins using remote sensing. *Remote Sensing of Environment* 113, 40-49.
41. Visser, A., J.D. Schaap, H.P. Broers and M.F.P. Bierkens, 2009. Degassing of $^3\text{H}/^3\text{He}$, CFCs and SF₆ by denitrification: Measurements and two-phase transport simulations. *Journal of Contaminant Hydrology* 103, 206-218.
42. Visser, A., R. Heerdink, H.P. Broers and M.F.P. Bierkens, 2009. Travel Time Distributions Derived from Particle Tracking in Models Containing Weak Sinks. *Ground Water* (in press). doi: 10.1111/j.1745-6584.2008.00542.x
43. Schuurmans, J.M. and M. F. P. Bierkens, 2009. Ability to forecast regional soil moisture with a distributed hydrological model using ECMWF rainfall forecasts. *Journal of hydrometeorology* 10, 544-554.
44. van Loon AH, Schot PP, Griffioen J, M.F.P. Bierkens and M. Wassen, 2009. Palaeo-hydrological reconstruction of a managed fen area in The Netherlands. *Journal of Hydrology* 378, 205-217.
45. van Loon AH, Schot PP, Griffioen J, M.F.P. Bierkens and M. Wassen, 2009. Throughflow as a determining factor for habitat contiguity in a near-natural fen. *Journal of Hydrology* 379, 30-40
46. Rozemeijer JC, Broers HP, van Geer FC, and M.F.P. Bierkens, 2009. Weather-induced temporal variations in nitrate concentrations in shallow groundwater, *Journal of Hydrology* 378, 119-127.
47. A. Visser, I. Dubus, H.-P. Broers, S. Brouyere, M. Korcz, e Ph. Orban, P. Goderniaux, J. Battle-Aguilar, N. Surdyk, N. Amraoui, H. Job, J.- L. Pinault and M.F.P. Bierkens. 2009. Comparison of methods for the detection and extrapolation of trends in groundwater quality. *Journal of Environmental Monitoring* 11, 2030-2043.
48. de Vries W, Reinds GJ, Bierkens MFP, 2009. Assessment of the optimal time interval for repeated soil surveys at intensively monitored forest plots. *Journal of Environmental Monitoring* 11, 2009-2021.
49. van Loon AH, Schot PP, Bierkens MFP, J. Griffioen and M. Wassen, 2009. Local and regional impact of anthropogenic drainage on fen contiguity. *Hydrology and Earth System Sciences* 13, 1837-1848.
50. Bierkens MFP, van Beek LPH, 2009. Seasonal Predictability of European Discharge: NAO and Hydrological Response Time, *Journal of Hydrometeorology* 10, 953-968.
51. Visser A, Broers HP, Heerdink R, M.F.P. Bierkens, 2009, Trends in pollutant concentrations in relation to time of recharge and reactive transport at the groundwater body scale, *Journal of Hydrology* 369, 427-439.
52. Karssenbergh D, Schmitz O, Salamon P, K. de Jong and M.F.P. Bierkens, 2010. A software framework for construction of process-based stochastic spatio-temporal models and data assimilation. *Environmental Modelling & Software* 25, 489-502.
53. Kleinhans MG, Bierkens MFP, van der Perk, 2010. HESS Opinions On the use of laboratory experimentation: 'Hydrologists, bring out shovels and garden hoses and hit the dirt'. *Hydrology and Earth System Sciences* 14, 369-382.
54. Immerzeel WW, van Beek LPH, Bierkens MFP, 2010. Climate Change Will Affect the Asian Water Towers, *Science* 328, 1382-1385.
55. Brolsma RJ, Karssenbergh D, Bierkens MFP, 2010. Vegetation competition model for water and light limitation. I: Model description, one-dimensional competition and the influence of groundwater *Ecological Modelling* 221, 1348-1363.

56. Brolsma RJ, van Beek LPH, Bierkens MFP , 2010. Vegetation competition model for water and light limitation. II: Spatial dynamics of groundwater and vegetation *Ecological Modelling* 221, 1364-1377.
57. Sperna Weiland, F.C., L. P. H. van Beek, J. C. J. Kwadijk, and M. F. P. Bierkens, 2010. The ability of a GCM-forced hydrological model to reproduce global discharge variability, *Hydrology and Earth System Science* 14, 1595-1621.
58. Rozemeijer, J., Y. Van der Velde, F. C. van Geer, M.F.P. Bierkens and H.P. Broers, 2010. Direct measurements of the tile drain and groundwater flow route contributions to surface water contamination: From field-scale concentration patterns in groundwater to catchment-scale surface water quality. *Environmental Pollution* 158, 3571-3579.
59. Wada, Y., L. P.H. van Beek, C. M. van Kempen, J. W.T.M. Reckman, S. Vasak, and M. F.P. Bierkens, 2010. Global depletion of groundwater resources. *Geophysical Research Letters* L20402, doi:10.1029/2010GL044571.
60. Brolsma, R. J., M. T. H. van Vliet, and M. F.P. Bierkens, 2010. Climate change impact on a groundwater-influenced hillslope ecosystem, *Water Resources Research* 46, W11503, doi:10.1029/2009WR008782.
61. Rozemeijer, J., Y. Van der Velde, R.G. McLaren, F. C. van Geer, and H.P. Broers and M.F.P. Bierkens, 2010. Integrated modeling of groundwater-surface water interactions in a tile-drained agricultural field: the importance of directly measured flow route contributions. *Water Resources Research* 46, W11537, doi:10.1029/2010WR009155.
62. Immerzeel, W.W. and M.F.P. Bierkens, 2010. Reply to "Asian water towers: more on monsoons" by F Pithan. *Science* 330, 585.
63. Immerzeel, W.W. and M. F. P Bierkens, 2010. Seasonal prediction of monsoon rainfall in three Asian river basins: the importance of snow cover on the Tibetan Plateau. *International Journal of Climatology* 30, 1835–1842.
64. Van Beek, LPH, Wada, Y., Bierkens, MFP, 2011. Global monthly water stress: 1. Water balance and water availability. *Water Resources Research*, 47, W07517.
65. Wada, Y., van Beek, LPH, Viviroli, D., Dürr, HH, Weingartner, R., Bierkens, MFP, 2011. Global monthly water stress: 2. Water demand and severity of water stress. *Water Resources Research*, 47, W07518.
66. Gruber, T., Bamber, JL, Bierkens, MFP, Dobslaw, H., Murböck, M., Thomas, M., van Beek, LPH, van Dam, T., Vermeersen, LLA, Visser, P, 2011. Simulation of the time-variable gravity field by means of coupled geophysical models. *Earth System Science Data* 3, 19-35.
67. Sperna Weiland, FC, van Beek, LPH, Weerts, AH, Bierkens, MFP, 2011. Extracting information from an ensemble of GCMs to reliably assess future global runoff change. *Journal of Hydrology* (in press).
68. Sutanudjaja, EH, van Beek, LPH, de Jong, SM, van Geer, FC, Bierkens, MFP, Large-scale groundwater modeling using global datasets: a test case for the Rhine-Meuse basin. *Hydrology and Earth System Sciences* 15, 2913-2935, 2011.
69. Lam, A, D Karssenbergh, BJM. van den Hurk, and MFP Bierkens, 2011. Spatial and temporal connections in groundwater contribution to evaporation. *Hydrology and Earth System Science* 15, 2621-2630.
70. van Loon, AH, Soomers, H., Schot, PP, Bierkens, MFP, Griffioen, J, Wassen, MJ, 2011. Linking habitat suitability and seed dispersal models in order to analyse the effectiveness of hydrological fen restoration strategies. *Biological conservation* 144, 1025-1035.
71. Wood, E.F., Roundy, J.K., Troy, T.J., van Beek, LPH, Bierkens, M.F.P., Blyth, E., de Roo, AA, Doll, P., Ek, M., Famiglietti, J. et al., 2011. Hyperresolution global land surface modeling: Meeting a grand challenge for monitoring Earth's terrestrial water. *Water Resources Research* 47, W05301.
72. Schuurmans, JM, van Geer, FC, Bierkens, MFP, 2011. Remotely sensed latent heat fluxes for model error diagnosis: a case study, *Hydrology and earth system sciences*, 15, 759-769, 2011.
73. Gain, A. K., Immerzeel, W. W., Sperna Weiland, F.C. and Bierkens, MFP, 2011. Impact of climate change on the stream flow of the lower Brahmaputra: trends in high and low flows based on discharge-weighted ensemble modeling. *Hydrology and Earth Syst.em Science* 15, 1537-1545.
74. Immerzeel, W.W., van Beek, L.P.H., Konz, M., Shrestha, AB, Bierkens, M.F.P., 2011. Hydrological response to climate change in a glacierized catchment in the Himalayas, *Climatic Change* 110, 721-736.
75. Lana-Renault, N., Latron, J., Karssenbergh, D., Serrano, P., Regüés, D., Bierkens, MFP, 2011. Differences in stream flow in relation to changes in land cover: a comparative

- study in two sub-Mediterranean mountain catchments. *Journal of Hydrology* 411: 366-378.
76. Wada, Y., van Beek, L.P.H., Bierkens, M.F.P., 2011. Modelling global water stress of the recent past: on the relative importance of trends in water demand and climate variability. *Hydrology and Earth System Sciences* 15, 3785-3808.
 77. Wada, Y., L. P. H. van Beek and M. F. P. Bierkens, 2011. Modelling global water stress of the recent past: on the relative importance of trends in water demand and climate variability. *Hydrology Earth and System Sciences* 15, 3785-3808, doi:10.5194/hess-15-3785-2011.
 78. Wada, Y., L. P. H. van Beek and M. F. P. Bierkens, 2012. Nonsustainable groundwater sustaining irrigation: A global assessment. *Water Resources Research* 48, W00L06, doi:10.1029/2011WR010562. (Also a Featured Article)
 79. Karssenberg, D. and M.F.P. Bierkens. 2012. Early-warning signals (potentially) reduce uncertainty in forecasted timing of critical shifts. *Ecosphere* 3, Article 15, [doi:http://dx.doi.org/10.1890/ES11-00293.1]
 80. Sperna Weiland, F.C., L.P.H. van Beek, A.H. Weerts and M.F.P. Bierkens, 2012. Extracting information from an ensemble of GCMs to reliably assess future global runoff change. *Journal of Hydrology* 412-413, 66-75.
 81. Sperna-Weiland, F.C., L. P. H. van Beek, J. C. J. Kwadijk and M. F. P. Bierkens, 2012. On the Suitability of GCM Runoff Fields for River Discharge Modeling: A Case Study Using Model Output from HadGEM2 and ECHAM5. *Journal of Hydrometeorology* 13, 140-154.
 82. Sperna Weiland, F. C., L.P.H. van Beek, J.C.J Kwadijk and M.F.P. Bierkens, 2012. Global patterns of change in discharge regimes for 2100. *Hydrology and Earth System Science* 16, 1047-1062.
 83. Dermody, B.J., H.J. de Boer, M.F.P. Bierkens, S.L. Weber, M.J. Wassen, and S.C. Dekker, 2012. A seesaw in Mediterranean precipitation during the Roman Period linked to millennial-scale changes in the North Atlantic. *Climate of the Past* 8, 637-651.
 84. Wada, Y., L.P.H. van Beek, F.C. Sperna Weiland, B.F. Chao, Y.-H. Wu, and M.F.P. Bierkens, 2012., Past and future contribution of global groundwater depletion to sea-level rise, *Geophysical Research Letters* 39, L09402.
 85. Vannamettee E., D. Karssenberg and M.F.P. Bierkens, 2012. Towards closure relations in the Representative Elementary Watershed (REW) framework containing observable parameters: Relations for Hortonian overland flow. *Advances in Water Resources* 43, 52-66.
 86. Von Asmuth, J.R., K. Maas, M. Knotters, M.F.P. Bierkens, M. Bakker, T.N. Olsthoorn, G. Cirkel, I. Leunk, F. Schaars and D.C. von Asmuth, 2012. Software for hydrogeologic time series analysis, interfacing data with physical insight. *Environmental Modelling & Software* 38, 178-190.
 87. Gleeson, T.Y. Wada, M.F.P. Bierkens, L.P.H. van Beek, 2012. Water balance of global aquifers revealed by groundwater footprint. *Nature* 488 197-200.
 88. Droogers, P., W.W. Immerzeel, W., Terink, J. Hoogeveen, M.F.P. Bierkens, L.P.H. van Beek and B. Debele, 2012. Water resources trends in Middle East and North Africa towards 2050. *Hydrology and Earth System Science* 16, 3101-3114.
 89. Van Beek, L. P. H., T. Eikelboom, M. T. H. van Vliet, and M. F. P. Bierkens, 2012. A physically based model of global freshwater surface temperature. *Water Resources Research* 48, W09530.
 90. Candogan-Yossef, N., L.P.H. van Beek, J.C.J. Kwadijk and M.F.P. Bierkens, 2012. Assessment of the potential forecasting skill of a global hydrological model in reproducing the occurrence of monthly flow extremes. *Hydrology and Earth System Sciences* 16, 4233-4246.
 91. Immerzeel, W.W. and Bierkens, M.F.P., 2012. Asia's water balance. *Nature Geoscience* 5, 841-842.
 92. Wanders, N., D. Karssenberg, M.F.P. Bierkens, R. Parinussa, R. de Jeu, J. van Dam and Steven de Jong, 2013. Observation uncertainty of satellite soil moisture products determined with physically-based modeling. *Remote Sensing of Environment* 127, 2012, 341-356.
 93. Bouwman, A.F., Bierkens, M.F.P., Griffioen, J., Hefting, M.M., Middelburg, J.J., Middelkoop, H. and Slomp, C.P., 2013. Nutrient dynamics, transfer and retention along the aquatic continuum from land to ocean: Towards integration of ecological and biogeochemical models. *Biogeosciences* 10, 1-23.

94. Taylor, R.G., Scanlon, B., Döll, P., Rodell, M., Van Beek, R., Wada, Y., Longuevergne, L., Leblanc, M., Famiglietti, J.S., Edmunds, M., Konikow, L., Green, T.R., Chen, J., Taniguchi, M., Bierkens, M.F.P., Macdonald, A., Fan, Y., Maxwell, R.M., Yechieli, Y., Gurdak, J.J., Allen, D.M., Shamsudduha, M., Hiscock, K., Yeh, P.J.-F., Holman, I., Treidel, H.. 2013. Ground water and climate change. *Nature Climate Change* 3, 322-329.
95. Gregory, J. M., N. J. White, J. A. Church, M. F. P. Bierkens, J. E. Box, M. R. van den Broeke, J. G. Cogley, X. Fettweis, E. Hanna, P. Huybrechts, L. F. Konikow, P. W. Leclercq, B. Marzeion, J. Oerlemans, M. E. Tamisiea, Y. Wada, L. M. Wake, R. S. W. van de Wal, 2013. Twentieth-Century Global-Mean Sea Level Rise: Is the Whole Greater than the Sum of the Parts? *Journal of Climate* 26, 4476-4499.
96. Pozzi, Will, Justin Sheffield, Robert Stefanski, Douglas Cripe, Roger Pulwarty, Jürgen V. Vogt, Richard R. Heim Jr., Michael J. Brewer, Mark Svoboda, Rogier Westerhoff, Albert I. J. M. van Dijk, Benjamin Lloyd-Hughes, Florian Pappenberger, Micha Werner, Emanuel Dutra, Fredrik Wetterhall, Wolfgang Wagner, Siegfried Schubert, Kingtse Mo, Margaret Nicholson, Lynette Bettio, Liliana Nunez, Rens van Beek, Marc Bierkens, Luis Gustavo Goncalves de Goncalves, João Gerd Zell de Mattos, Richard Lawford, 2013. Toward Global Drought Early Warning Capability: Expanding International Cooperation for the Development of a Framework for Monitoring and Forecasting. *Bulletin of the American Meteorological Society* 94, 776-785.
97. Immerzeel, W.W., F. Pellicciotti and M.F.P. Bierkens, 2013. Rising river flows throughout the twenty-first century in two Himalayan glacierized watersheds, *Nature Geoscience* 6, 742-745.
98. Vannamettee, E., D. Karssenber, M. R. Hendriks and M. F. P. Bierkens, 2013. Hortonian runoff closure relations for geomorphologic response units: evaluation against field data. *Hydrology and Earth System Science* 17, 2981-3004.
99. Candogan-Yossef, N, H. Winsemius, A. Weerts, R. van Beek, and M. F. P. Bierkens, 2013. Skill of a global seasonal streamflow forecasting system, relative roles of initial conditions and meteorological forcing. *Water Resources Research* 49, doi:10.1002/wrcr.20350.
100. Sutanudjaja, E.H., S.M. de Jong, F.C. van Geer, M.F.P. Bierkens, 2013. Using ERS spaceborne microwave soil moisture observations to predict groundwater head in space and time. *Remote Sensing of Environment* 138, 172-188.
101. Wissler, D., S. Froelking, S. Hagen, and M. F. P. Bierkens, 2013. Beyond peak reservoir storage? A global estimate of declining water storage capacity in large reservoirs, *Water Resources Research* 49, doi:10.1002/wrcr.20452.
102. Lutz, A. F., W.W. Immerzeel, A. Gobiet, F. Pellicciotti, F. and M.F.P. Bierkens, 2013. Comparison of climate change signals in CMIP3 and CMIP5 multi-model ensembles and implications for Central Asian glaciers, *Hydrology and Earth System Science* 17, 3661-3677.
103. Wada, Y., L.P.H. van Beek, N. Wanders and M.F.P. Bierkens, 2013. Human water consumption intensifies hydrological drought worldwide. *Environmental Research Letters* 8, 034036 (14 pp).
104. Ward, Ph.J., B. Jongman, F. Sperna Weiland, A. Bouwman, L.P.H. van Beek, M.F.P. Bierkens, W. Ligtoet and H.C. Winsemius, 2013. Assessing flood risk at the global scale: model setup, results, and sensitivity. *Environmental Research Letters* 8, 044019 (10pp).
105. Wada, Y., D. Wissler, and M. F. P. Bierkens, 2014. Global modeling of withdrawal, allocation and consumptive use of surface water and groundwater resources. *Earth System Dynamics* 5, 15-40.
106. De Graaf, I.E.M., L.P.H. van Beek, Y. Wada, M.F.P. Bierkens, 2014. Dynamic attribution of global water demand to surface water and groundwater resources: Effects of abstractions and return flows on river discharges *Advances in Water Resources* 64, 21-33.
107. Sutanudjaja, E.H., L.P.H. van Beek, S.M. de Jong, F.C. van Geer, and M.F.P. Bierkens 2014. Calibrating a large- extent high-resolution coupled groundwater-land surface model using soil moisture and discharge data. *Water Resources Research* 50, 687-705.
108. Ehret, U., Gupta, H. V., Sivapalan, M., Weijs, S. V., Schymanski, S. J., Blöschl, G., Gelfan, A. N., Harman, C., Kleidon, A., Bogaard, T. A., Wang, D., Wagener, T., Scherer, U., Zehe, E., Bierkens, M. F. P., Di Baldassarre, G., Parajka, J., van Beek, L. P. H., van Griensven, A., Westhoff, M. C., and Winsemius, H. C., 2014. Advancing

- catchment hydrology to deal with predictions under change. *Hydrology and Earth System Science* 18, 649-671.
109. Immerzeel, W.W., P.D.A. Kraaijenbrink, J.M. Shea, A.B. Shrestha, F. Pellicciotti, M.F.P. Bierkens and S.M. de Jong, 2014. High-resolution monitoring of Himalayan glacier dynamics using unmanned aerial vehicles. *Remote Sensing of Environment* 150, 93–103.
 110. Lutz, A.F., W.W. Immerzeel, A.B. Shrestha and M.F.P. Bierkens, 2014. Consistent increase in High Asia's runoff due to increasing glacier melt and precipitation. *Nature Climate Change* 4, 587-592.
 111. Dermody, B.J., L.P.H. Van Beek, E. Meeks, K. Klein Goldewijk, W. Scheidel, Y. Van Der Velde, Y., M.F.P. Bierkens, M.J. Wassen and S.C. Dekker, 2014. A virtual water network of the Roman world. *Hydrology and Earth System Sciences* 18, 5025-5040.
 112. Delsman, J.R., K.R.M. Hu-A-Ng, P.C. Vos, P. G.B. De Louw, G.H.P. Oude Essink, P.J. Stuyfzand and M.F.P. Bierkens, 2014. Paleo-modeling of coastal saltwater intrusion during the Holocene: An application to the Netherlands. *Hydrology and Earth System Sciences* 18, 3891-3905.
 113. Wada, Y. and M.F.P. Bierkens, M.F.P., 2014. Sustainability of global water use: Past reconstruction and future projections. *Environmental Research Letters* 9, art. no. 104003, .
 114. Vannamettee, E., L.V. Babel, M.R. Hendriks, J. Schuur, S.M. de Jong, M.F.P. Bierkens and D. Karssenber, 2014. Semi-automated mapping of landforms using multiple point geostatistics. *Geomorphology* 221, 298-319.
 115. Wanders, N., D. Karssenber, A. De Roo, S.M. De Jong and M.F.P. Bierkens, 2014. The suitability of remotely sensed soil moisture for improving operational flood forecasting. *Hydrology and Earth System Sciences* 18, 2343-2357.
 116. Siteur, K., M.B. Eppinga, D. Karssenber, M. Baudena, M.F.P. Bierkens and M. Rietkerk, 2014. How will increases in rainfall intensity affect semiarid ecosystems? *Water Resources Research* 50, 5980-6001.
 117. Van Boxel, J.H., Z. González-Carranza, H. Hooghiemstra, M.F.P. Bierkens and M.I. Vélez, 2014. Reconstructing past precipitation from lake levels and inverse modelling for Andean Lake La Cocha. *Journal of Paleolimnology* 51, 63-77.
 118. Frieler, K., Levermann, A., Elliott, J., Heinke, J., Arneeth, A., Bierkens, M.F.P., Ciais, P., Clark, D.B., Deryng, D., Döll, P., Falloon, P., Fekete, B., Folberth, C., Friend, A.D., Gellhorn, C., Gosling, S.N., Haddeland, I., Khabarov, N., Lomas, M., Masaki, Y., Nishina, K., Neumann, K., Oki, T., Pavlick, R., Ruane, A.C., Schmid, E., Schmitz, C., Stacke, T., Stehfest, E., Tang, Q., Wisser, D., Huber, V., Piontek, F., Warszawski, L., Schewe, J., Lotze-Campen, H., Schellnhuber, H.J., 2015. A framework for the cross-sectoral integration of multi-model impact projections: Land use decisions under climate impacts uncertainties. *Earth System Dynamics* 6, 447-460.
 119. van der Knaap, Y.A.M., M. de Graaf, R. van Ek, J.P.M. Witte, R. Aerts, M.F.P. Bierkens and van P.M. Bodegom, 2015. Potential impacts of groundwater conservation measures on catchment-wide vegetation patterns in a future climate. *Landscape Ecology* 30, 855-869.
 120. De Graaf, I.E.M., E.H. Sutanudjaja, L.P.H. Van Beek and M.F.P. Bierkens, 2015. A high-resolution global-scale groundwater model. *Hydrology and Earth System Sciences* 19, 823-837.
 121. Sperna Weiland, F.C., J.A. Vrugt, L.P.H. van Beek, A.H. Weerts and M.F.P. Bierkens, 2015. Significant uncertainty in global scale hydrological modeling from precipitation data errors. *Journal of Hydrology* 529, 1095-1115.
 122. Voortman, B.R., R.P. Bartholomeus, S.E.A.T.M Van Der Zee, M.F.P. Bierkens and J.P.M. Witte, 2015. Quantifying energy and water fluxes in dry dune ecosystems of the Netherlands. *Hydrology and Earth System Sciences* 19, 3787-3805.
 123. Bierkens, M.F.P., Bell, V.A., Burek, P., Chaney, N., Condon, L.E., David, C.H., de Roo, A., Döll, P., Drost, N., Famiglietti, J.S., Flörke, M., Gochis, D.J., Houser, P., Hut, R., Keune, J., Kollet, S., Maxwell, R.M., Reager, J.T., Samaniego, L., Sudicky, E., Sutanudjaja, E.H., van de Giesen, N., Winsemius, H. and Wood, E.F., 2015. Hyper-resolution global hydrological modelling: What is next?: "Everywhere and locally relevant" Invited Commentary. *Hydrological Processes* 29, 310-320.
 124. Bierkens, M.F.P., 2015. *Global hydrology 2015: State, trends, and directions*. Water Resources Research 51, 4923-4947. 50th year Anniversary Issue.
 125. Immerzeel, W.W., N. Wanders, A.F. Lutz, J.M. Shea and M.F.P. Bierkens, 2015. Reconciling high-altitude precipitation in the upper Indus basin with glacier mass balances and runoff. *Hydrology and Earth System Science* 19, 4673-4687.

126. Winsemius, H.C., J.C.J.H. Aerts, L.P.H. van Beek, M.F.P. Bierkens, A. Bouwman, B. Jongman, J. Kwadijk, W. Ligtvoet, P.L. Lucas, D.P. van Vuuren and P.J. Ward, 2015. Global drivers of future river flood risk. *Nature Climate Change* 6, 381–385.
127. Straatsma, M.W., P.T.M. Vermeulen, M.J.M. Kuijper, M. Bonte, F.G.M. Niele and M.F.P. Bierkens, M. F. P. 2016. Rapid Screening of Operational Freshwater Availability Using Global Models. *Water Resources Management*, 1-14.
128. López López, P., N. Wanders, J. Schellekens, L.J. Renzullo, E.H. Sutanudjaja and M.F.P. Bierkens, 2016. Improved large-scale hydrological modelling through the assimilation of streamflow and downscaled satellite soil moisture observations. *Hydrology and Earth System Sciences* 20, 3059-3076.
129. Huizer, S., G.H.P. Oude Essink and M.F.P. Bierkens, 2016. Fresh groundwater resources in a large sand replenishment. *Hydrology and Earth System Sciences* 20, 3149-3166.
130. Van Vliet, M.T.H., L.P.H. van Beek, S. Eisner, M. Flörke, Y. Wada and M.F.P. Bierkens, 2016. Multi-model assessment of global hydropower and cooling water discharge potential under climate change. *Global Environmental Change* 40, 156-170.
131. Wijngaard, R.R., K. Helfricht, K. Schneeberger, M. Huttenlau, K. Schneider, and M.F.P. Bierkens, 2016. Hydrological response of the Otztal glacierized catchments to climate change. *Hydrology Research* 47, 979-995.
132. Lutz, A.F., W.W. Immerzeel, W.W., P.D.A. Kraaijenbrink, A.B. Shrestha and M.F.P. Bierkens, 2016. Climate change impacts on the upper Indus hydrology: Sources, shifts and extremes. *PLoS ONE* 11, e0165630.
133. Hoch, J.M., A.V. Haag, A Van Dam, H.C. Winsemius, H.C., L.P.H. Van Beek and M.F.P. Bierkens, 2017. Assessing the impact of hydrodynamics on large-scale flood wave propagation; A case study for the Amazon Basin. *Hydrology and Earth System Sciences* 21, 117-132.
134. Wijngaard, R.R., M. van der Perk, B. van der Grift, T.C.M. de Nijs and M.F.P. Bierkens, 2017. The Impact of Climate Change on Metal Transport in a Lowland Catchment. *Water, Air, and Soil Pollution* 228(3), 107.
135. De Graaf, I.E.M., L.P.H. van Beek, T. Gleeson, N. Moosdorf, O. Schmitz, E.H. Sutanudjaja and M.F.P. Bierkens, 2017. A global-scale two-layer transient groundwater model: Development and application to groundwater depletion. *Advances in Water Resources* 102, 53-67.

Publications in proceedings of international conferences

1. Bierkens, M.F.P., P.A. Burrough, W.P.A. van Deursen and G.B.M. Heuvelink, 1990. Sources of error and error propagation in groundwater models linked to GIS. In: Poster proceedings international congress on the calibration and reliability of groundwater models, The Hague, pp. 33-44.
2. Bierkens, M.F.P. and C.E. Puente, 1991. Analytically derived runoff models based on rainfall point processes. In: I.D. Cluckie and C.G. Collier (Editors), Proceedings of the international congress on the hydrological applications of weather radar 1989, pp. 411-423. Ellis Horwood, Manchester.
3. Bierkens, M.F.P. and P.A. Burrough, 1993. Modelling of map impurities using sequential indicator simulation. In: A. Soares (Editor), Proceedings of the international congress on geostatistics '92, Troia, Portugal, pp. 637-648. *Quantative Geology and Geostatistics*, Kluwer Academic Publishers.
4. Bierkens, M.F.P., H.J.T. Weerts and P.A. Burrough, 1994. Geostatistical characterization of a complex semi-permeable layer. In: N. Rengers (Editor), *Engineering Geology of Quaternary Sediments*, Proceedings of the 20-year jubilee symposium of the Ingeokring, Delft, the Netherlands, pp. 73-92. Balkema, Rotterdam.
5. Bierkens, M.F.P. , 1996. Using stratification and residual kriging to Mapping urban soil pollution. In: E. Baafi (Editor), Proceedings of the international congress on geostatistics '96, Wollongong, Australia, pp 996-1007. *Quantative Geology and Geostatistics*, Kluwer Academic Publishers.
6. Bierkens, M.F.P., M. Knotters and T. Hoogland, 2000. Stochastic spatio-temporal modelling of water table depth using a regionalized ARX model and the Kalman filter. In: G.B.M. Heuvelink and M.J.P.M. Lemmens (Editors), Accuracy 2000, Proceedings of the 4th international symposium on spatial accuracy assessment in natural resources and environmental sciences, Amsterdam, Netherlands, pp. 51-58. Delft University Press.

7. Bierkens, M.F.P., 2001. Optimisation of a piezometer network using a statistical space-time model and the Kalman filter. In: E.E. van Loon and P.A. Troch (Editors), *Book of Abstracts of the International Workshop on Catchment Scale Hydrological Modeling and Data Assimilation*, Wageningen, September 3-5, 2001: pp. 37. Wageningen University, Environmental Sciences, Rapport 101.
8. Bierkens, M.F.P., 2002. Using Stochastic simulation and a cost model to designing monitoring networks for groundwater pollution. In: K. Kovar and Z. Hrkal (Editors), *ModelCare 2002, Proceedings of Fourth International Conference on Calibration and Reliability in Groundwater Modelling*, Prague, Czech Republic, June 17-20, 2002: pp 310-314.
9. Bierkens, M.F.P., 2002. Optimising a monitoring network for groundwater pollution using stochastic simulation and a cost model. In: S.M. Hassanizadeh et al. (Editors), *Computational Methods in Water Resources, Proceedings of the XIVth International Conference on Computational Methods in Water Resources*, Delft, Netherlands, June 23-28, 2002: pp 1443-1450. *Developments in Water Science 47*, Elsevier, Amsterdam.
10. Van Geer, F.C., C.B.M. te Stroet and M.F.P. Bierkens, 1990. Groundwater modelling in relation to the system's response time using Kalman filtering. In: Gambolati et al. (Editors), *Computational methods in subsurface hydrology*, Proceedings of the 8th International congress on computational methods in water resources, Venice, Italy, pp. 23-29. Springer-Verlag, Boston.
11. Van der Perk, M. and M.F.P. Bierkens, 1995. Combined calibration and sensitivity analysis for a water quality model of the Biebzra River, Poland. In: J.F.Th. Schoute et al. (Editors), *Scenario Studies for the Rural Environment*, Proceedings of the 5th anniversary symposium of the DLO - Winand Staring Centre, Wageningen, pp. 299-304. Kluwer Academic Publishers.
12. Van Geer, F.C., W.H. Mulder and M.F.P. Bierkens, 1996. Optimizing freshwater data monitoring networks (design, collection and dissemination) including links with modelling; country paper of the Netherlands. In: Proceedings of the second technical 310-314. review meeting of Euraqua (European Network of Fresh Water Research Organisation), Paris, La Defense, France, 1995, pp. 151-163.
13. Knotters, M. and M.F.P. Bierkens, 2000. Accuracy of spatio-temporal RARX model predictions of water table depths. In: G.B.M. Heuvelink and M.J.P.M. Lemmens (Editors), *Accuracy 2000*, Proceedings of the 4th international symposium on spatial accuracy assessment in natural resources and environmental sciences, Amsterdam, Netherlands, pp. 365-372. Delft University Press.
14. Finke, P.A., M.F.P. Bierkens and P. de Willigen. 2001. Choosing appropriate upscaling and downscaling methods for environmental research. In: Joop Steenvoorden, Frans Claessen and Jaap Willems (Editors), 2001. Proceedings of the Intern. Conf. on Agricultural Effects on Ground and Surface waters. IAHS Publ. 273, pp.405-409.
15. Visser, A., J.D. Schaap, A. Leijnse, H.P. Broers and M.F.P. Bierkens, 2008. Modelling two-phase transport of ³H/³He. In: J.C. Refsgaard et al. (editors), *ModelCARE 2007: Credibility of Modelling*, Proceedings of the sixth International Conference on Calibration and Reliability in Groundwater Modelling, Copenhagen, Denmark, pp. 226-231, IAHS Publication 320.
16. Dürr, H.H., L.P.H. van Beek, C.P. Slomp, H. Middelkoop and M.F.P. Bierkens, 2008. Global Land-Ocean Linkage: Direct Inputs of Water and Associated Nutrients to Coastal Zones via Submarine Groundwater Discharge (SGD). In: Proceedings of the 20th Salt Water Intrusion Meeting, Naples, Florida, 27-75.
17. Lana-renault, N. J. Latron, D.J karssenber, P. Serrano, D. Regüés and M.F.P. Bierkens, 2012. Seasonal differences in runoff between forested and non-forested catchments: a case study in the Spanish Pyrenees. In: *Revisiting Experimental Catchment Studies in Forest Hydrology*, Proceedings of a Workshop held during the XXV IUGG General Assembly in Melbourne, June–July 2011, IAHS Publ. 353.
18. Sutanudjaja, E.H., Van Beek, L.P.H., De Jong, S.M., Van Geer, F.C., Bierkens, M.F.P., 2012. Calibrating a large-scale groundwater model using spaceborne remote sensing products: A test-case for the Rhine-Meuse basin. *IAHS-AISH Publication*, 355, pp. 54-61.
19. Flörke, M., S. Eisner, N. Hanasaki, Y. Masaki, Y. Wada, and M. F. P. Bierkens, 2013. A multi-model ensemble for identifying future water stress hotspots. In: *Impacts World 2013 Conference Proceedings*, pp. 254–260, Potsdam Inst. for Clim. Impact Res., Potsdam, Germany, doi: 10.2312/pik.2013.001.

Publications in Dutch Journals

1. Bierkens, M.F.P., 1994. Blokdoorlatendheden; opschaling in geohydrologie. *H₂O* 27(23), 674-684.
2. Bierkens, M.F.P., 1996. Commentaar op 'variatie in permeabiliteit van een pleistocene rivierafzetting en de invloed op grondwaterstroming' van R.E. Laperre e.a., 1996, *H₂O* 29(18), pp. 520-523. *H₂O* 29(24), 726-727.
3. Bierkens, M.F.P., 1996. Commentaar op "Een nieuw transportmodel voor verontreiniging in het grondwater" van Wipfler e.a., 1996, *Stromingen* jrg 2, nr1, pp. 13-25. *Stromingen* jrg 2, nr3, 58-61.
4. Bierkens, M.F.P., 1998. Eenvoudige stochastische modellen voor grondwaterstandsfluctuaties; 1: Een stochastische differentiaalvergelijking. *Stromingen* 4(2), 5-30.
5. Bierkens, M.F.P. and D.J.J. Walvoort, 1998. Eenvoudige stochastische modellen voor grondwaterstandsfluctuaties; 2: Gecombineerd bodem-grondwatermodel met stochastische invoer. *Stromingen* 4(3), 5-20.
6. Bierkens, M.F.P., M. Knotters and F.C. van Geer, 1999. Tijdreeksanalyse nu ook toepasbaar bij onregelmatige meetfrequenties. *Stromingen* 5(2), 43-54.
7. Knotters, M. and M.F.P. Bierkens, 1999. Tijdreeksmodellen voor de grondwaterstand; een kijkje in de black box. *Stromingen* 5(3), 35-49.
8. Knotters, M. and M.F.P. Bierkens, 1999. Hoe lang moet je meten om iets over de dynamiek te weten. *Stromingen* 5(4), 5-12.
9. Van Bakel, P.J.T. and M.F.P. Bierkens, 1999. Omgaan met maaiveldverschillen bij peilbeheer; De keuze van een representatieve locatie. *H₂O* 32(12), 15-17.
10. Von Asmuth, J., C. Maas en M.F.P. Bierkens, 2001. Waarom doen alsof de neerslag eens per jaar valt? Het discrete Box-Jenkins- versus het continue PIRFICT-tijdreeksmodel, in theorie. *Stromingen* 7(4), 33-44.
11. Von Asmuth, J., M.F.P. Bierkens en C. Maas en, 2002. Soms is weten beter dan meten (tenzij je verkeerd zit natuurlijk). Het discrete Box-Jenkins- versus het continue PIRFICT-tijdreeksmodel, in praktijk. *Stromingen* 8(1), 5-14.
12. Runhaar, J., P.J.T. van Bakel, M.F.P. Bierkens en P.A. Finke, 2002. Werken met waterlood. Proeftoepassing in het gebied De Leijen. *Stromingen* 8(1), 15-31.
13. Schuurmans, J.M. en M.F.P. Bierkens, 2007. Belang van betere neerslaginformatie voor hydrologen. *H₂O* 40(12), 27-29.
14. Bierkens, M.F.P. et al, 2010. Verbonden door water: van 1984 via het heden naar 2034. *H₂O* 11-2010, 20-23.
15. Bleuten, W. en M.F.P. Lysimeteronderzoek naar de evapotranspiratie van riet en elen in een trilveen bij Schalkwijk (U). *Stromingen* 21(3).

Reports

1. Bierkens, M.F.P., 1990. An alternative filter algorithm for fast reacting groundwater systems. TNO-DGV, rapport OS 90-07-A, Delft.
2. Bierkens, M.F.P., 1995. Huidig en toekomstig onderzoek naar de ruimtelijke en temporele variabiliteit van het freatisch grondwaterniveau. DLO – Staring Centrum, Interne Mededeling 342, Wageningen.
3. Bierkens, M.F.P., 1996. Foutenanalyse in waterbalansstudies. DLO – Staring Centrum, rapport 460, Wageningen.
4. Bierkens, M.F.P., 1997. Ruimtelijke interpolatie van zware metalen en PAK's ten behoeve van de bodemkwaliteitskaart van de Gemeente Utrecht. DLO – Staring Centrum, rapport 514, Wageningen.
5. Bierkens, M.F.P. 1998. Stochastic differential equation for modeling water table fluctuations. DLO – Staring Centrum, Interne Mededeling 507, Wageningen.
6. Bierkens, M.F.P., P.J.T. van Bakel and J.G. Wesseling, 1998. Representativiteit van puntinformatie voor de beheersing van het oppervlaktewaterpeil in een beheerseenheid. DLO – Staring Centrum, Interne Mededeling, Wageningen.
7. Bierkens, M.F.P., 1999. Ruimtelijke patronen van zware metalen en PAK's in de Gemeente Utrecht; Uitbreiding Leidsche Rijn en weglating verdachte locaties. DLO – Staring Centrum, rapport 659, Wageningen.
8. Bierkens, M.F.P. and W.J.M. te Riele, 1999. Schatting van grondwaterstanden met behulp van een digitaal terreinmodel; Uitsluiten grondwatermeetnet Waterschap Meppelderdiep. DLO – Staring Centrum, Rapport 685, Wageningen.

9. Bierkens, M.F.P. and H.Th.L. Massop, 2000. Optimalisatie meetlocaties grondwaterstanden waterschap De Aa; Representatieve locaties voor grondwaterafhankelijk peilbeheer. Alterra, Rapport 010, Wageningen.
10. Bierkens, M.F.P. and W.A. Bron, 2001. VIDENTE: a graphical user interface and decision support system for stochastic modelling of water table fluctuations at a single location. Alterra, rapport 118, Wageningen.
11. Bierkens, M.F.P., J.J. de Gruijter and T. Hoogland, 2002. Ontwerp van een hydrologisch monitoringsysteem voor de Langbroekerwetering. Alterra, Rapport 496, Wageningen.
12. Bierkens, M.F.P. and T. Hoogland, 2002. Actualisatie van de grondwaterdynamiek.: volledige herkartering of beperkte actualisatie? Alterra, Rapport 602, Wageningen.
13. Bierkens, M.F.P., W.A. Bron and M. Knotters, 2002. VIDENTE: a graphical user interface and decision support system for stochastic modelling of water table fluctuations at a single location; Second revised edition. Alterra, rapport 613, Wageningen.
14. Bierkens, M.F.P., 2003. Over de mogelijke inhoud van REGIS-III. Opsomming van mogelijkheden met voorbeelden. TNO rapport NITG 03-095-B, Utrecht.
15. Bierkens, M.F.P., 2004. TOPSYS uitwerking: vlakdekkende modellering van niet-lineaire grondwaterdynamiek door landschapsanalyse. TNO Rapport NITG 04-010-B0105, Utrecht.
16. Bierkens, M.F.P., C. Laban, R. Arts, O. Abbink, Th.H.M. van Doorn, S.F. van Gessel, H. Pagnier, R.W. Vernes, H.J.T. Weerts and W. Westerhoff, 2005. Een visie op de toekomstige kartering- en karakterisatie-inspanningen van TNO-NITG. TNO Rapport GI-10.015, Utrecht.
17. Finke, P.A., M.F.P. Bierkens, W. Drosen and J. Stolp, 1996. Gebiedsdekkende basisinformatie voor het regionale waterbeheer in het waterschap Rijn en IJssel; programmeringstudie. DLO - Staring Centrum, rapport 474, Wageningen.
18. Wonink, P., P.J.T. van Bakel, M.F.P. Bierkens, J. Esenkbrink, H. ter Horst, D.J. Marsman and J.G. Wesseling, 1997. Verkennende studie naar de mogelijkheden van grondwaterstandsafhankelijk peilbeheer in de waterschappen Meppelderdiep en Wold en Wieden. TauwMabeg Civiel en Bouw, rapport 970940, Deventer.
19. Harmen, J. and M.F.P. Bierkens, 1997. Maatstaf voor de effectiviteit van saneringstechnieken voor vervuilde locaties. DLO - Staring Centrum, rapport 509, Wageningen.
20. Van Geer, F.C., A.H.M. Kremers and M.F.P. Bierkens, 1998. Invloed van de winning Assen op de hydrologie van het stroomdal van de Drentsche Aa. Deelonderzoek A: Analyse van waarnemingsreeksen. NITG-TNO, rapport 98-107-B, Delft.
21. Knotters, M. and M.F.P. Bierkens, 1998. The relationship between time series models for water table depth and physical information. DLO - Staring Centre, Report 167, Wageningen.
22. Groenendijk, P., M.F.P. Bierkens, J.C. van Dam, M.J.B. van Elswijk, E.J. Moors, R.M. Lokers, A.J. Otjens, A.A.M.F.R. Smit and A.A. Veldhuizen, 1998. Domeinanalyse frameworks integraal waterbeheer. DLO - Staring Centrum, Interne Mededeling 512, Wageningen.
23. Walvoort, D.J.J. and M.F.P. Bierkens, 1999. EMERALD: A stochastic modelling approach for rapid assessment of groundwater dynamics. DLO - Staring Centrum, report 171, Wageningen.
24. Bolt, F.J.E., M.F.P. Bierkens and H. Kleier, 1999. Beoordeling kwelonderzoek Ketelmeer. Onderzoek naar het oorzakelijk verband tussen de in de Noordoostpolder opgetreden landbouwschade en de aanleg van het speciedepot IJsselooig in het Ketelmeer. DLO-Staring Centrum, rapport 636.
25. Finke, P.A., T. Hoogland, M.F.P. Bierkens, D.J. Brus, M. Knotters, and F. de Vries, 1999. Pilot naar een nieuwe beschrijving van grondwaterkaarten in het Weerijsgebied; Methodiekontwikkeling met extrapolatie naar een plan van aanpak voor Noord-Brabant.
26. Knotters, M., M.F.P. Bierkens and C.P. Beets, 2000. Grondwaterdynamiek van vegetatiestandplaatsen; Analyse van zesentwintig tijdreeksen. Alterra, rapport 095, Wageningen.
27. Finke, P.A., W.P.C. Zeeman, G. Schouten, J. Runhaar, P. van der Molen, W. van der Meer, J.J. de Gruijter, M.F.P. Bierkens, P.J.T. van Bakel and J. Hoeks (red.), 2001. Beter werken met "Waternood"; Een proeftoepassing in het herinrichtingsgebied De Leijen. Alterra, rapport 267, Wageningen.
28. Knotters, M., M.F.P. Bierkens and T. Hoogland, 2001. Optimalisatie primair meetnet grondwaterstand Gelderland; Haalbaarheid gebruik hulpinformatie. Alterra, rapport 234, Wageningen.

29. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap De Aal. Alterra, rapport 380 Wageningen.
30. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap De Dommel. Alterra, rapport 381, Wageningen.
31. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap De Maaskant. Alterra, rapport 382, Wageningen.
32. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap Peel en Maasvallei. Alterra, rapport 383, Wageningen.
33. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap De Dongestroom. Alterra, rapport 384, Wageningen.
34. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap Land van Nassau. Alterra, rapport 385, Wageningen.
35. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap Het Scheldekwartier. Alterra, rapport 386, Wageningen.
36. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap Mark en Weerijds. Alterra, rapport 387, Wageningen.
37. Finke, P.A., M.F.P. Bierkens, D.J. Brus, J.W.J. van der Gaast, T. Hoogland, M. Knotters, F. de Vries, 2002. Klimaatsonafhankelijke grondwaterdynamiek in Waterschap Alm en Biesbosch. Alterra, rapport 388, Wageningen.
38. Van Geer, F.C., M.F.P. Bierkens, E. van Leeuwen, H. Hakvoort, T. Hoogland and J. Peeters, 2002. Meten voor waterlood. Stowa Rapport 2002-14, Utrecht.
39. Gehrels, J.C., A. Lourens, M.F.P. Bierkens en G. van Oyen, 2003. Toetsingsinstrumentarium voor vergunningverlening van beregening in de landbouw. TNO rapport NITG 03-097-B, Utrecht.
40. Hoogland, T., J. Runhaar en M.F.P. Bierkens, 2003. DOENAT: Een applicatie voor de allocatie van natuurdoeltypen en berekening van de doelrealisatie; modelbeschrijving en toepassingen. Alterra rapport 400, Wageningen.
41. Vernes, R.W., Th.H.M. van Doorn, M.F.P. Bierkens, S.F. van Gessel and E. de Heer, 2005. Van Gidslaag naar hydrogeologische eenheid. Toelichting op de totstandkoming van de dataset REGIS II. TNO Rapport NITG 05-038-B, Utrecht.