

## CURRICULUM VITAE

**Name** G.A.P.H. van den Eertwegh, PhD  
**First name** Gé  
**Date of birth** 1-4-1966  
**Nationality** Dutch  
**Knowledge and disciplines** Hydrology, integrated water management, nutrients and water quality; team leader, project manager, consultant  
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### Key Qualifications

Gé van den Eertwegh (PhD) is hydrologist. His expertise is on integrated water management. He is a specialist in water and solute balances modeling, aiming at supporting strategic and operational decision making for drainage, irrigation and climate impact assessment. Additionally, his professional profile includes team leader and project manager capacities. He combines people management with business aspects. He works for FutureWater as senior hydrologist and manager since January 2012. His expertise in the Netherlands after his PhD includes 16 years of working experience at Wageningen University, water boards of Rijnland and Rivierenland, and KWR Watercycle Research Institute. He has worked abroad on a project basis (e.g. China, Malaysia, USA, India, Pakistan, and Vietnam), and was actively involved in the ICID International Commission on Irrigation and Drainage, Working Group on Environment.

### Educational background

2002 PhD at Wageningen Agricultural University, The Netherlands.  
Subject: Water and Nutrient balances - travel times of drainage water and nutrient loads to surface water.

1990 MSc at Wageningen Agricultural University, The Netherlands.  
Subjects: groundwater- and surface water-hydrology, rainfall runoff modelling, chemical water quality.

1984 Gymnasium B at Marianum College, Venlo, The Netherlands.

Courses on team management and project management.

### Professional Experience

2012 - to date FutureWater, The Netherlands.  
Manager/senior hydrologist.  
FutureWater is a research company concerned with the future of our water resources. FutureWater applies and, if required, develops scientific methodologies, concepts and tools to assure sustainable water resources solutions for the future. Activities can be summarized as water for food and water for nature under changing environments, including climate change. Simulation models, GIS and RS are the tools used to assist in these activities. Projects take place in the developed as well as the developing world. Emphasis on a pro-active approach with strategic thinking and tools.

- 2010 – 2012 KWR Watercycle Research Institute, The Netherlands.  
Team leader Ecology and project manager.  
Water cycle research based on water system management, with respect to sustainability and the natural environment. Ecohydrological studies of field sites, development of expert systems based on location characteristics, and process based modeling of ecohydrology under a changing climate.
- 2005 – 2010 Water board Rivierenland, The Netherlands.  
Team leader.  
Ground and surface water hydrology, surface water chemistry and aquatic ecology. Simulation models and site studies. Water systems analysis. Database management.
- 1997 – 2005 Water board Rijnland, The Netherlands.  
Project manager and team leader.  
Surface water hydrology, surface water chemistry and aquatic ecology. Simulation models and integrated site studies. Water systems analysis. Integrated projects with provinces and local communities. Project manager of two regional scale research projects in the Dutch polder area on agriculture, water management and water chemistry: peat soils and reclaimed lake.
- 1992 – 1997 Wageningen Agricultural University, Dept. Water Resources, The Netherlands.  
National Institute for Public Health and the Environment, The Netherlands.  
PhD-student.  
Subject: Water and Nutrient balances - travel times of drainage water and nutrient loads to surface water.
- 1990 – 1992 Wageningen Agricultural University, Dept. Water Resources, The Netherlands.  
Associate researcher.  
Short-term water level and discharge forecasts for the Rhine River (t+4 days).  
Development and update of statistical model.

### Overseas Professional Experience

#### *Non-resident assignments:*

China, Malaysia, USA, Pakistan, India, Vietnam.

#### *Projects:*

- Modernization of irrigation systems in northern Nile basin Egypt. World Bank (2011-2012).
- Green Water Management and Credits in China: case study Wuhan, Yangtze River basin. Partners for Water (2012-2013).
- Towards a Mekong Delta Portal, Vietnam. Partners for Water (2012-2013).
- OPI Romania (2013-2015): development and design of an online irrigation strategy, based on integrated field data and modeling results.

### Consulting Experiences

*Only consultancies started, on-going or completed after 2003 are included.*

- 2003-2005 Rijnland water board: hydrology; water quality; water management
- 2005-2010 Rivierenland water board: hydrology; water quality; water management
- International Commission on Irrigation and Drainage (ICID)
- STOWA: advisory board

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2010-2012	KWR Watercycle Research Institute Surface water mass balance uncertainty Agricultural crop damage due to hydrologic impact of groundwater extraction and surface water management National Hydrological modelling Instrument (NHI)
2012-present	FutureWater Climate Adaptive Drainage system: development, design, and field test Groundwater for Crops: optimal use of soil and groundwater for crop production Groundwater recharge at Veluwe natural area

### Miscellaneous

ICID	Secretary of Working group on Environment (2005-2010)
STOWA	Water system analysis, chairman of advisory panel of water boards (2005-2010)
TNO	Chairman of User Committee on Subsurface Soil Modeling (2008-2012)

### Publications

#### *In dutch*

- Eertwegh, G.A.P.H. van den (1992):  
Voorspellingen waterstand en afvoer Rijn. Ministry of Public Works and Water Management, RIZA, Leystad, the Netherlands. RIZA Report No. 92.006.
- Eertwegh, G.A.P.H. van den en A.L. Mugie (1994):  
Korte termijn voorspellingen waterstand en afvoer Bovenrijn te Lobith. H<sub>2</sub>O (27) 1994, No. 5.
- Meinardi, C.R. and G.A.P.H. van den Eertwegh (1995):  
Onderzoek aan drainwater in de kleigebieden van Nederland. Deel I: Resultaten van het veldonderzoek. RIVM Rapport No. 714901007.
- Brongers, I. and K.P. Groen and G.A.P.H. van den Eertwegh and C.R. Meinardi (1996):  
Emissie van bestrijdingsmiddelen en nutriënten naar het oppervlaktewater via drainage. Ministry of Transport, Public Works and Water Management, Flevobericht No. 384.
- Meinardi, C.R. and G.A.P.H. van den Eertwegh (1997):  
Onderzoek aan drainwater in de kleigebieden van Nederland. Deel II: Gegevens van het oriënterend onderzoek. RIVM Rapport No. 714801013.
- Meinardi, C.R., G.A.P.H. van den Eertwegh, and C.G.J. Schotten (1998):  
Grondwateraanvulling en oppervlakkige afstroming in Nederland. Deel 2: De ontwatering van kleigronen. In: Stromingen 4 pp. 5-19 (1998).
- Eertwegh, G.A.P.H. van den and C.R. Meinardi (1999):  
Water- en nutriëntenhuishouding van het stroomgebied van de Hupselse Beek. RIVM, National Institute of Public Health and the Environment, rapport no. 714901005. Wageningen Agricultural University, Dept. of Water Resources. Rapport 74.

- Eertwegh, G.A.P.H. van den, J.R. Hoekstra, and C.R. Meinardi (1999):  
Praktijkproef Nutriëntenbalans: Nutriëntenbelasting oppervlaktewater via drainage van akkerbouwpercelen op zavel. Wageningen Agricultural University, Dept. of Water Resources. Rapport 75.
- Eertwegh, G.A.P.H. van den, J.G. Kroes, A. Smit en F.H. van Schaik (2003):  
Peilbeheer met FIW MultiSWAP. H<sub>2</sub>O 20 (2003), pp. 28-31.
- Eertwegh, G.A.P.H. van den, en C.L. van Beek (2004):  
Veen, water en vee. Water- en nutriëntenhuishouding van een veenweidepolder. Eindrapport van het Veenweideproject fase I, uitgevoerd in de Vlietpolder. Hoogheemraadschap van Rijnland.
- Hardeveld, H.A. van, G.A.P.H. van den Eertwegh en C.L. van Beek (2006):  
Verbetering waterkwaliteit in veenweidepolders haalbaar. H<sub>2</sub>O No. 12 (2006).
- Vries, P. de, G.A.P.H. van den Eertwegh en L. Nooteboom (2006):  
Modern waterbeheer is transparant en doelgericht: Hoogheemraadschap van Rijnland van taakgericht naar doelgericht. H<sub>2</sub>O No. 8 (2006).
- Eertwegh, G.A.P.H. van den en M.I. Mul (2007):  
Evaluatie Meststoffenwet voor een betere kwaliteit van het oppervlaktewater? Twee opinie-artikelen in H<sub>2</sub>O (2007).
- Eertwegh, Gé van den, Joost Heijkers, Durk Klopstra en Michelle Talsma (2009):  
Onzekere hydrologische modelresultaten: bedreigend of gewenste informatie? H<sub>2</sub>O / 3-2009.
- Eertwegh, Gé van den, Leo Kuipers, Wim Klerk, Jan van Bakel, Lodewijk Stuyt, Ad van Iersel en Michelle Talsma (2012):  
KlimaatAdaptieve Drainage: een innovatief middel voor waterschap en agrariër tegen piekafvoeren en watertekorten als gevolg van klimaatverandering. H<sub>2</sub>O / 18-2012.
- Terink, Wilco, Jan van Bakel, Eertwegh, Gé van den, en Peter Droogers (2013):  
KlimaatAdaptieve Drainage: Modelberekeningen met SWAP ter bepaling van effecten KAD op reductie van piekafvoeren en op waterconservering. FutureWater rapport nr. 117.
- Bakel, Jan van, Gé van den Eertwegh, Harry Massop en Jäirus Brandsma (2013):  
KlimaatAdaptieve Drainage: Landelijke geschiktheid van conventionele, samengestelde peilgestuurde en klimaatadaptieve drainage. FutureWater rapport nr. 118.
- Eertwegh, Gé van den, m.m.v. Ada Karimlou-Kranendonk (2013):  
KlimaatAdaptieve Drainage: Juridisch-bestuurlijke aspecten. FutureWater rapport nr. 119.
- Eertwegh, Gé van den, en Peter Droogers (2013):  
KlimaatAdaptieve Drainage: Analyse van kosten en baten voor waterbeheerder en agrariër. FutureWater rapport nr. 120.
- Eertwegh, Gé van den, Leo Kuipers, Wim Klerk, Jan van Bakel, Lodewijk Stuyt, Ad van Iersel en Michelle Talsma (2013):  
KlimaatAdaptieve Drainage: een innovatieve methode om piekafvoeren en watertekorten te verminderen. Eindrapportage Fase 2 'Onderzoek en Ontwikkeling'. Referentienummer SBIR113008. FutureWater rapport nr. 121.

Eertwegh, Gé van den, Leo Kuipers, Wim Klerk, Jan van Bakel, Lodewijk Stuyt, Ad van Iersel en Michelle Talsma (2013):

Waterregie in droge en natte tijden. KlimaatAdaptieve Drainage, innovatief waterbeheer op regionaal en perceelsniveau. H<sub>2</sub>O - 5, 2013.

*International*

Luft, G., G.A.P.H. van den Eertwegh, and H.-J. Vieser (1990):

Veränderung der Bodensee-Wasserstände von 1887 bis 1987 (in Duits). LfU Baden-Württemberg, Karlsruhe. Handbuch Hydrologie Baden-Württemberg, Teil 6, 6.2 Berichte, 1990.

Luft, G. and G.A.P.H. van den Eertwegh (1990):

Long-term changes in water level of Lake Constance and possible causes. Annex to Proceedings and Information No. 44, pp. 21-40 (1990). CHO TNO Committee on Hydrological Research, the Netherlands.

Luft, G. and G.A.P.H. van den Eertwegh (1991):

Long-term changes in the water level of Lake Constance and possible causes. IAHS Symposium Hydrology of Natural and Man-made Lakes, Vienna, 1991. IAHS Publication No. 206, 1991.

Eertwegh, G.A.P.H. van den and P.M.M. Warmerdam (1993):

Storm runoff and nutrient transport from a drained plot in the Hupsel catchment. Second International Conference on Friend, Braunschweig, 1993. Editor: A. Herrmann, TU Braunschweig, Germany.

Eertwegh, G.A.P.H. van den (1994):

Transport of nutrients to small surface waters through drainage. IAHR Symposium Transport and Reactive Processes in Aquifers, Switzerland, 1994. Proceedings, pp. 255-261.

Nieber, J.L., G.A.P.H. van den Eertwegh, and R.A. Feddes (1998):

Modeling multidimensional water flow and solute transport in dual-porosity soils. ASAE 7<sup>th</sup> Drainage Symposium Proceedings 'Drainage in the 21<sup>st</sup> Century: Food Production and the Environment', Florida, 1998.

Louw, P.G.B. de, G.A.P.H. van den Eertwegh, and J. Griffioen (2000):

High nutrient and chloride loads to surface waters in polder areas due to groundwater seepage. Proceedings of the 30<sup>th</sup> AH Congress on Groundwater: Past achievements and future challenges. Cape Town, South Africa, 2000. A.A. Balkema Publishers, Rotterdam-Brookfield.

Eertwegh, G.A.P.H. van den, J.L. Nieber, and R.A. Feddes (2001):

Multidimensional flow and transport in a drained, dual-porosity soil. ASAE 2<sup>nd</sup> International Symposium and Exhibition on Preferential Flow, Hawai, 2001.

Louw, P.G.B. de, J. Griffioen, G.A.P.H. van den Eertwegh, and B. Calf (2002):

High nutrient and chloride loads in polder areas due to groundwater exfiltration. 2<sup>nd</sup> International Conference on New Trends in Water and Environmental Engineering for Safety and Life: Eco-compatible Solutions for Aquatic Environments, Capri, Italy, June 24-28, 2002.

Eertwegh, G.A.P.H. van den (2002):

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Water and nutrient budgets at field and regional scale. Travel times of drainage water and nutrient loads to surface water. Proefschrift, Wageningen Universiteit.

- Beek, C.L. van, G.A.P.H. van den Eertwegh, F.H. van Schaik, and A. van den Toorn (2003):  
Surface runoff from intensively managed grassland on peat soils; a diffuse source of nitrogen and phosphorus in surface waters. Congress paper 'Diffuse input of chemicals into soils & groundwater: Assessment & Management'. February 26-28, 2003, Dresden, Germany.
- Beek, C.L. van, G.A.P.H. van den Eertwegh, F.H. van Schaik, G.L. Velthof, and O. Oenema O. (2004):  
The contribution of dairy farming on peat soil on N and P loading of surface water. Nutrient Cycling in Agroecosystems 70: pp. 85-95.
- Groenendijk, P. and G.A.P.H. van den Eertwegh (2004):  
Travel times of groundwater exfiltration to surface water. Unsaturated zone modeling: progress, challenges, and applications. Wageningen University, October 2004.
- Eertwegh, G.A.P.H. van den, J.L. Nieber, P.G.B. de Louw, H.A. van Hardeveld, and R. Bakkum (2005):  
Impacts of drainage activities for clay soils on hydrology and surface water quality. ICID tri-annual congress, Beijing, September 2005.
- Eertwegh, G.A.P.H. van den, J.L. Nieber, P.G.B. de Louw, H.A. van Hardeveld, and R. Bakkum (2006):  
Impacts of drainage activities for clay soils on hydrology and solute loads to surface water. Irrigation and Drainage 55, 235-245 (2006).
- Beek, C.L. van, P. Droogers, H.A. van Hardeveld, G.A.P.H. van den Eertwegh, G.L. Velthof, and O. Oenema (2006):  
Leaching of solutes from an intensively managed peat soil to surface water.