

CURRICULUM VITAE

Personal Details

Nynke Hofstra

Associate Professor, Water Systems and Global Change Group, Wageningen University

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Date of Birth: 19th of June 1981

Nationality: Dutch

Gender: Female

Education

2005-2009 PhD, Oxford University Centre for the Environment, Oxford, England

Title: "Development and evaluation of a European daily high-resolution gridded dataset of surface temperature and precipitation for 1950 - 2006", Daily supervisor: Dr. Mark New

2003-2005 MSc, Wageningen University, Wageningen, the Netherlands

MSc. Environmental Sciences, cum laude (top 5%).

Major: Environmental Systems Analysis, minor: Air Quality.

2000-2003 BSc, Wageningen University, Wageningen, the Netherlands

BSc. Environmental Sciences. Specialisation: Environmental Systems Analysis

Professional background

- **2019-present** Associate professor, *Water Systems and Global Change Group, Wageningen University*
- **2008-2018** Assistant professor, *Environmental Systems Analysis Group, Wageningen University*
- **2005-2009** PhD, *Oxford University Centre for the Environment, Oxford, England*

Research experience

The main focus of my work is to apply environmental systems analysis approaches to the field of water and health. With my group we have initiated and are further developing the Global Waterborne Pathogen (GloWPa) model that simulates pathogen concentrations in surface water worldwide. I and my team also develop microbiological water quality models at a more local scale, for example in basins in Bangladesh and Pakistan, in Mexico city, and in Uganda for the Bill and Melinda Gates foundation funded project Knowledge to Practice (K2P) in which we utilise the data from the literature summarised in the Global Water Pathogen Project (GWPP, www.waterpathogens.org) and develop a tool for others to estimate the microbial water quality in their own regions. We use the models in scenario analyses to understand global change impacts on waterborne pathogens and disease and also explore opportunities to use the model in microbial risk assessment. I aim to contribute to an integrated approach that works towards solving environmental problems and reaching the sustainable development goals.

- **2018-2020** Bill and Melinda Gates foundation funded project K2P
- **2017** Organising an international workshop entitled "Water quality: a new challenge for global scale modelling" to be held in Wageningen 18-21 September 2017
- **2013 – present** Guest-editor for:
 - Current Opinion in Environmental Sustainability for special issue on Global Water Quality Modelling (2019)
 - Journal of Environmental Quality for special issue on Microbial Water Quality (2018)
 - Food Research International for special issue on Climate Change and Food Safety (2014)
- **2011-2014** Work package leader for WP9 of the EU funded Veg-i-Trade project
- **2010 – present** PhD Supervision
 - **Cheng Liu** September 2010 – 2015, defense 8 September 2015
 - **Muhammad Shahid Iqbal** September 2012 – 2017, defense 30 August 2017
 - **Lucie Vermeulen** January 2013 – 2018, defense 16 February 2018

- **Majedul Islam** July 2013 – 2017, defense 30 August 2017
- **Daniel Okaali** April 2018 – present
- **Nancy Mondragon** July 2018 - present
- **2005 – 2009** PhD at the Centre for the Environment at Oxford University; worked in an international team on the observational temperature and precipitation dataset (E-OBS) for the EU-funded project ENSEMBLES.

Teaching experience

I have been involved in teaching activities ever since I was a student. First as student assistant, then as tutor teaching climatology to geography students during my PhD, and currently as course coordinator and lecturer in Environmental Systems Analysis courses at Wageningen University. I (re)developed several courses, such as the MSc course Introduction to Global Change, the BSc course International Study Visits for Environmental Science students (who learn how to collaborate with students from Kiev, Ukraine, while learning all about radioactivity and nuclear power) and the course Introduction to Environmental Systems Analysis for 2nd year BSc students around Climate Change Impact Assessment. I obtained my University Teaching Qualification in 2011 and have been involved in the Programme Committee for Environmental Sciences.

Acquisition

- **2019** Funding to employ a postdoc to help write a large research proposal on health risks from human and animal manure in agriculture for a team of collaborators in the Netherlands.
- **2018** Funding from Michigan State University to make microbial water quality maps and scenarios for the Bill and Melinda Gates Foundation funded project K2P
- **2018** Mexico government funding for Nancy Mondragon's PhD
- **2017** Funding from OECD-CRP to organise a workshop entitled "Water quality: a new challenge for global scale modelling" to be held in Wageningen 18-21 September 2017
- **2010-2014** Funding for PhD projects from Lucie Vermeulen, Shahid Iqbal and Majedul Islam

Key Publications

My 37 papers have been cited 1,243 (3,618) times in total. My H-index is 12 (16). (Web of Science (Google Scholar), 18-9-2019)

- Limaheluw, J., Medema, G.J., Hofstra, N. (2019) An exploration of the disease burden due to *Cryptosporidium* in consumed surface water for sub-Saharan Africa. *International Journal of Hygiene and Environmental Health* 222(5), 856-863. doi: <https://dx.doi.org/10.1016/j.ijheh.2019.04.004>.
- Hofstra, N., Vermeulen, L.C., Derx, J., Flörke, M., Mateo-Sagasta, J., Rose, J., Medema, G.J. (2019) Priorities for Developing a Modelling and Scenario Analysis Framework for Waterborne Pathogen Concentrations in Rivers Worldwide and Consequent Burden of Disease. *Current Opinion in Environmental Sustainability* 36, 28-38. doi: <https://dx.doi.org/10.1016/j.cosust.2018.10.002>.
- Vermeulen, L.C., Van Hengel, M., Kroeze, C., Medema, G.J., Spanier, J.E., Van Vliet, M.T.H., Hofstra, N. (2019) *Cryptosporidium* Concentrations in Rivers Worldwide. *Water Research* 149, 202-214. doi: <https://dx.doi.org/10.1016/j.watres.2018.10.069>.
- Islam, M. M. M., Iqbal, M. S., Leemans, R. and Hofstra, N. (2018) 'Modelling the impact of future socioeconomic and climate change scenarios on river microbial water quality', *International Journal of Hygiene and Environmental Health* 221(2), 283–292. doi: <https://dx.doi.org/10.1016/j.IJHEH.2017.11.006>.
- Vermeulen, L.C., de Kraker, J., Hofstra, N., Kroeze, C., Medema, G. (2015) Modelling the impact of sanitation, population growth and urbanization on human emissions of *Cryptosporidium* to surface waters-a case study for Bangladesh and India. *Environmental Research Letters* 10(9), 094017 doi: <https://doi.org/10.1088/1748-9326/10/9/094017>.

Other

I frequently present at international conferences and workshops. I regularly review articles for scientific organisations and journals, including *Environmental Science and Technology*, *Water Research* and many others.