



Rekel/water

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www.rekel.nl/water
www.waterharmonica

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Curriculum Vitae of Ruud Kampf



Work related activities

- Acknowledged consultant Waterharmonica, natural water reuse processes, simple waste water treatment at Rekel/water;
- Owner Rekel/water;
- Co-owner Rekel Kenya Ltd, based in Nairobi, Kenya;
- Professional photographer, member of Nikon professional Services NPS;
- Experienced in practical work, "handy man", carpentry, fixer;
- Birdwatcher , nature lover;
- Experienced independent traveller, throughout the world. Thorough knowledge of GPS navigation.

Date of birth

31 August 1951

Martial status

Married in 1975.

Number of years work experience

Over 40.

Nationality

Netherlands.

Languages

Dutch (native), English (fluent), German, French, Norwegian (from good to basic).

Profile

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Researcher from birth, especially aimed on a mix of bringing research into practice and bringing practice into research. From childhood aimed on water, water quality and on everything that lives in and on water.

Specialised on simplicity of processes, to find simple solutions and on developing simplicity in “constructed natural processes” from a technical background: ecological engineering”. In general it is more difficult to find a simple solution than a complicated, difficult one.

Team role: creative thinker, developer, generalist without losing attention for detail and realism.

Constructive out of the box thinker.

Social media and websites

- LinkedIn: nl.linkedin.com/in/ruudkampf/
- Facebook: www.facebook.com/ruud.kampf
- Private web site: www.rekel.nl
- Company web site: www.rekel.nl/water
- Waterharmonica: www.waterharmonica.nl

(International) memberships

- Waternetwerk
- International Water Association IWA
- Board member of International Ecological Society IEES
- Netherlands Ornithological Union NOU

Schooling

2003 – 2016: part time PhD study Waterharmonica, natural constructed wetlands between well-treated waste water and usable surface water, VU University Amsterdam, TU Delft
1970 - 1974: HTS Amsterdam, Chemical Process Engineering

Teaching

Guest lectures at Saxion University Deventer, Wageningen University, Vrije Universiteit Amsterdam, Humboldt State University Arcata, California, University of Girona, Spain, Dar es Salam University, Tanzania, Zurich University of Applied Sciences, Waedenswil, Switzerland, Kharkov Academy, Ukraine, etc.

Relevant conferences, courses and workshops

Attended, gave presentations and (co)organised many courses, workshops in The Netherlands. International presentations, courses given in Belgium, Czech Republic, Estonia, France, Germany, Norway, Spain, Sweden, Switzerland, Ukraine, United Kingdom and United States, Nepal, South Korea, Kenya, Tanzania. See for a selection of papers and presentations: www.waterharmonica.nl

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Career overview

TNO, Delft

Researcher

1974 – 1991 (17 years)

Research in waste water treatment, mainly low loaded activated sludge plants, oxidation ditches, nitrogen and phosphorus removal, sludge treatment, etc.
Biofilm process in Three-phase airlift reactors, incl. technical evaluation and cost calculations.
Sludge treatment in reed beds, etc.
Environmental studies, soil pollution, soil quality restoration.

Hoogheemraadschap Hollands Noorderkwartier, Edam

Researcher, 1991 – 2008 (17 years)

From 1991 - 1995: process engineer and research work on waste water treatment, mainly oxidation ditches.

From 1995 research work on upgrading effluent quality of STP's into a "usable surface water", inclusive development of constructed wetland systems like the Eversteekoog plant.
Food chain studies (Grickleback process): growing *Daphnia* on treated waste water for nature.

Development of the Waterharmonica concept: ww.waterharmonica.nl.

Assisting the design (and optimization) of Waterharmonica's Land van Cuijk, Aqualân Grou, Ootmarsum. Involved in preparation of possible Waterharmonica's Wervershoof, Geestermambacht, Stolpen, De Cocksdorp, Ameland, Apeldoorn, Marum, etc.

During the period 1995 - 2003 also worked on sediment quality and restoration of polluted areas, like the large dump site Volgermeer and the polluted nature area Ilperveld, close to Amsterdam.

Member of EUREAX, Water reuse group

Advisory board of the European project Neptune

Waternet, Amsterdam

Researcher Ecological Engineering, 2008 – 2011 (3 years) Amsterdam

Research on upgrading effluent quality of STP's into a "usable surface water" in "natural" constructed wetland systems. Food chain studies (Grickleback process): growing *Daphnia* on treated waste water for nature. Development of the Waterharmonica concept:

www.waterharmonica.nl

PhD study on Use of treated waste water for nature (incl. Development of the "Daphnia unit" for biological filtration of treated waste water). This project involves a network cooperation between Waternet, Wetterskip Fryslân, Consorci de la Costa Brava and the universities Vrije Universiteit, Universiteit van Amsterdam, Technische Universiteit Delft and Universidad de Girona.

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Evaluation of the design of a design for a wetland-lagoon system for wastewater management at Shimo la Tewa prison, Mombasa, Kenya on behalf of UNEP, Nairobi, Kenya through AquaforAll, The Hague, The Netherlands: www.waterharmonica.nl/cases_waterharmonica/shimo_la_tewa.htm.

Involved in preparation of possible Waterharmonica's Amstelveen, Geldermalsen.

Independent consultant, since 2011

- Consultant Waterharmonica and natural water reuse processes at Rekel/water, since 2011
- Owner Rekel/water,
- Co-owner Rekel Kenya Ltd, based in Nairobi, Kenya, since 2013
- Traveller, photographer, carpenter
- Guest worker at VU-university, department of Animal ecology, since 2003

Waterharmonica projects for the Foundation for Applied Water Research STOWA and Netherlands Waterplatform. Involved in most recent Waterharmonica projects: Water authorities Vechtstromen (Kristalbad), Wetterskip Fryslân (Grou, Ameland, Terschelling), Delfland and Rijkswaterstaat (Groote Lucht), Schieland en Krimpenerwaard (Berkenwoude). Assignments are from water authorities or through consultants like Witteveen + Bos, Royal HaskoningDHV, Antea, TAUW, Grontmij.

Member of Dutch mission on the Saemangum Delta, South-Korea

In coastal Kenya "closing the nutrient cycle / water reuse / sanitation projects for Aqua for All, and the school foundations Tenda Pamoja, Furaha. In close cooperation with the Haller Foundation in Mombasa and Kenya Prison Services.

Expert PUM Netherlands senior experts

Expert Dutch Risk Reduction team, swift water expertise emergency response.

Recent key presentations

- The Waterharmonica, research, practice and applications, Constructed wetlands: challenges and opportunities, 3 July 2014, Ghent University – Belgium
- Natural (biological) processes in today's infrastructure. Presentation on the Board meeting of the Global Water Research Coalition (GWRC), Singapore, 29 May 2014 by Joost Brunsmas of Stowa
- The Waterharmonica In The Netherlands, over 15 years, Wetland jubilee in Nynäshamn, Sweden, 22-24 May 2013

Reports and publications, only recent ones given here

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Waterharmonicas in the Netherlands (1996-2012). Natural constructed wetlands between well-treated waste water and usable surface water

Natural purification systems have already been used for years in The Netherlands to improve the quality of waste water before discharge or reuse. The first basic ideas design for the 'Waterharmonica' as the link between the Water Chain and the Water System were rewarded by the Foundation for Applied Water Research (STOWA) on its 25th anniversary in 1996. Since then, Waterharmonicas have been constructed in various places in The Netherlands, firstly on a small scale but now also on a large scale. Extensive research has been carried out into the working and effectiveness of these systems over the past 15 years and they are still being studied. Moreover, the Waterharmonica became rooted in Dutch water policy (Uijterlinde, 2012). The picture with regard to the applications of, and research into, Waterharmonicas is summarised and discussed in this report.

[www.stowa.nl/bibliotheek/publicaties/Waterharmonicas in the Netherlands 1996-2012 Natural constructed wetlands between well-treated waste water and usable surface water](http://www.stowa.nl/bibliotheek/publicaties/Waterharmonicas%20in%20the%20Netherlands%201996-2012%20Natural%20constructed%20wetlands%20between%20well-treated%20waste%20water%20and%20usable%20surface%20water)

Waterharmonica's in Nederland 1996-2012. Van effluent tot bruikbaar oppervlaktewater

Dutch version of the report above

[http://www.stowa.nl/bibliotheek/publicaties/Waterharmonica s in Nederland 1996-2012 Van effluent tot bruikbaar oppervlaktewater](http://www.stowa.nl/bibliotheek/publicaties/Waterharmonica%20s%20in%20Nederland%201996-2012%20Van%20effluent%20tot%20bruikbaar%20oppervlaktewater)

De toekomst van de Waterharmonica in Friesland, Verkenning mogelijkheden 2012-2027

Recent quick-scan of Waterharmonica systems for the water authority Wetterskip Fryslân for the period 2012 – 2027

http://www.waterharmonica.nl/reports/LW289-47_005-rapd02-waterharmonica.pdf

Reports and publications on the Waterharmonica Grou:

http://www.waterharmonica.nl/reports/rapporten_grou.html

- Aqualân Grou: van effluent naar levend water
- Waterharmonica Aqualân Grou 2006 - 2013. De Waterharmonica als natuurlijke schakel tussen waterketen en watersysteem
- Waterharmonica Aqualân Grou. Evaluatie 2006-2013
- Waterharmonica Aqualân Grou. Vijf jaar monitoring
- Waterharmonica Aqualân Grou, Biologische filtratie van effluent van de RWZI Grou in mesocosm bakken ter optimalisatie van watervlooienvijvers: fysische chemie
- Waterharmonica Aqualân Grou. Monitoring invloed verlaagd debiet 2012-2013

Stowa research project Zwevend stofonderzoek (Suspended solids in Waterharmonica's), including overview of functioning of 8 Waterharmonica's in The Netherlands (Elburg, Eversteekoo, Ootmarsum, Aqualân, Groote Beerze, Land van Cuijk, Sint Maartensdijk and Klaterwater):

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- Waterharmonica, onderzoek naar zwevend stof en pathogenen, hoofdrapport, Stowa
- Waterharmonica, onderzoek naar zwevend stof en pathogenen, deelstudierapporten, Stowa

Waterharmonica Kristalbad

- Cost-effectiveness, backgrounds of nitrogen and phosphorus removal

Waterharmonica Grootte Lucht, Hoogheemraadschap van Delfland en Rijkswaterstaat

- Quicksan Waterharmonica Aalkeet Binnenpolder
- Natural values Waterharmonica De Grootte Lucht
- Pre-design Waterharmonica Delfland (2014 – 2015)

Waterharmonica Berkenwoude

- Assessment of the design (2015)

Waterharmonica's Ameland and Terschelling

- Sketch design (2015)

Workshops / excursions

During the years many, f.e.:

Workshop IEES "Ecological Engineering and the Urban Landscape

"http://www.waterharmonica.nl/workshops/2010_09_iees_amsterdam/index.htm

SWIM Project Waterharmonica Study tour The Netherlands, 19 and 20 September 2013:

http://www.waterharmonica.nl/workshops/2013_09_19-20_SWIM_Waterharmonica/index.html

Excursion Waterharmonica Kristalbad, 22 juli 2014. Hoogheemraadschap van Delfland, Rijkswaterstaat

10th INTECOL International Wetlands Conference in Changsu, China 19-24 September, 2016
W3~4. The Waterharmonica, over 20 years experience with Reuse of waste water through natural processes

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