

MEDUWA-VECHT(E) Stakeholder & Partner Meeting 2020



MEDUWA-Vecht(e) Stakeholder & Partner meeting 2019, Nordhorn
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Sampling in Nordhorn
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Bridge jumping in Dalfsen
© Alfons Uijtewaal



de Haandrik canal and Vechte River
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**Feb 12-13, Zwolle
Provinciehuis Overijssel &
Bilderberg Hotel Wientjes**





MEDUWA-Vecht(e) Stakeholder & Partner Meeting 2020

MEDicines **U**nwanted in **WA**ter

Welcome

The MEDUWA-Vecht(e) coalition is pleased to welcome you to the final MEDUWA-Vecht(e) Stakeholder & Partner meeting of the INTERREG-VA MEDUWA-Vecht(e)-Project on the 12th and 13th of February 2020 in Zwolle, the Netherlands.

In addition to inspiring sessions about reducing medicines and multi-resistant bacteria in water, we would like to discuss related themes during these two days, such as climate change and water quality, climate change and the risk of infection associated with recreation in uncontrolled surface water and the strong increase in multi-resistant fungi. Furthermore, we would like to look back with you during this meeting on what has been achieved in and what has been learned from MEDUWA and its innovations and how they can influence EU policy.

Therefore, we have developed workshop formats to stimulate exchange on the innovations for different interest groups from the animal health sector, human health sector and policy advisors. With all these activities, we hope to generate ideas for follow-up initiatives in the post-MEDUWA period. In order to sustain our collaboration every project partner and stakeholder has been invited to sign the *MEDUWA Joint Declaration on the Emission of Human and Veterinary Medicines*, which has been shared with participants in advance of the meeting.

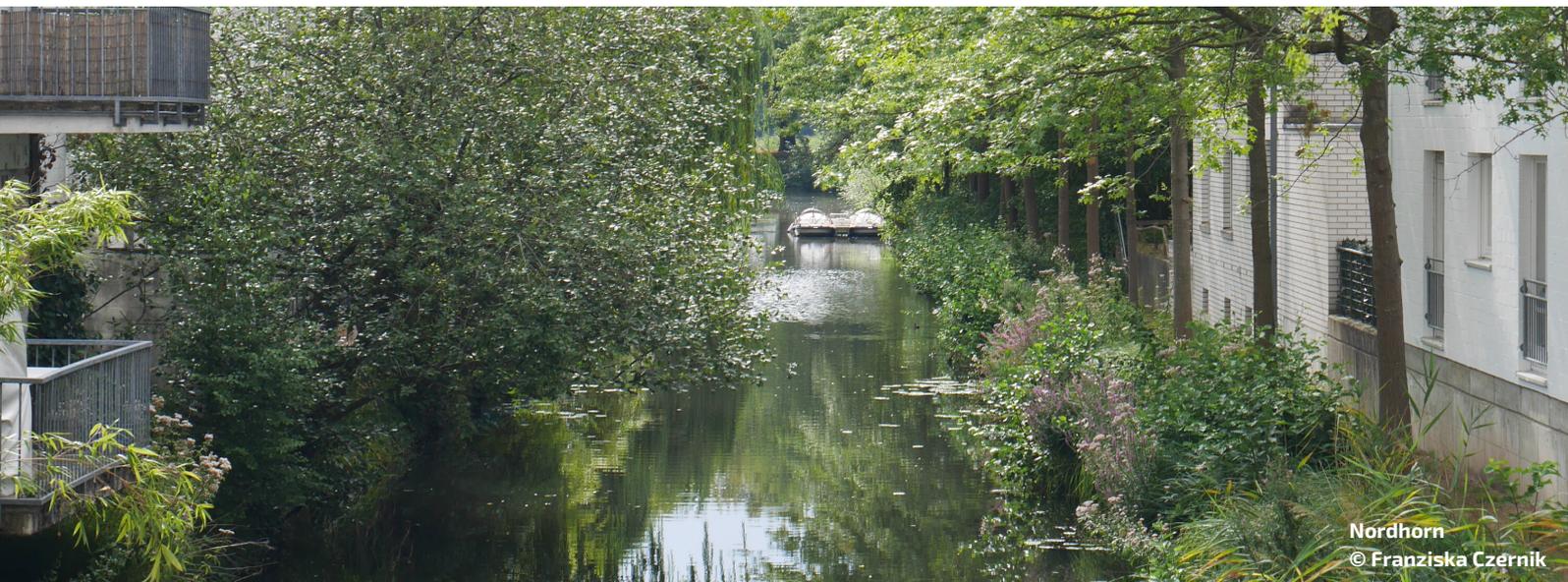
We look forward to a fruitful meeting.

Contact:

Raissa Ulbrich,
MEDUWA-Vecht(e) Project Manager

E-mail: raissa.ulbrich@uos.de

Phone: +49 541 969 3435





Agenda 12 February 2020

MEDicines Unwanted in WAter

Provinciehuis Overijssel, Luttenbergstraat 2, Zwolle

- 10:00 Registration & refreshments
- 10:30 Opening & welcome, Bert Boerman, Deputy Province of Overijssel; Erik Lievers, Board Member, Waterschap Vechtstromen; Raissa Ulbrich, MEDUWA Project Manager
- 10:45 Latest insights into environmental cycle of medicines & multi-resistant micro-organisms, and introduction to MEDUWA, Alfons Uijtewaal, Stichting Huize Aarde
- 11:00 Presentation & panel discussion: Implementation of European Strategy for Pharmaceuticals in the Environment, Cornelia Rudolph, European Commission - DG Environment
- 11:45 Pitches by MEDUWA project partners on the innovations under development:
1. The Watershed Information System (WIS), Geoplex GIS GmbH, Osnabrück University IUSF, Wetsus
 2. The Gray Water Footprint, Geoplex GIS GmbH, University Twente Water Management
 3. Regional Risk Assessment (RRA), Radboud University Environmental Sciences, AVIV BV
 4. Continuous Monitoring, InProSens, Saxion UAS, Novaris Orbit Technology BV
 5. Wireless Monitoring, Novaris Orbit Technology BV, InProSens, Saxion UAS, NX Filtration, Weil Wasseraufbereitung GmbH
 6. Nanofiltration, NXFiltration BV, Weil Wasseraufbereitung GmbH, Saxion UAS
 7. Plasma Activated Water Oxidation, VitalFluid, University Hospital of Münster IfH and IfMM, Radboud University Medical Center
 8. Phytoremediation, Europe Ayurveda Centrum, University Hospital of Münster IfH and IfMM
 9. Herbal Antibiotic Replacement, Europa Ayurveda Centrum, University Hospital Münster IfH and IfMM
 10. Algal Antibiotic Replacement, Microganic GmbH, University Hospital Münster IfH
 11. Farm Animal Monitoring, Noldus Information Technology BV, Demcon BV, Ubisense GmbH
 12. Biopharmaceuticals, Amrif BV, Alloksys BV, Tournois Dynamic Innovations BV, Aix Scientifics
- 12:45 Lunch buffet at Provinciehuis
- 13:15 Poster presentation of MEDUWA PhDs and Postdocs
- Modelling environmental antibiotic resistance gene abundance: A meta Analysis, Daniel Duarte, PhD candidate, Department of Environmental Science, Radboud University Nijmegen
 - Plasma Activated Water is capable to inactivate dormant bacteria in drinking water, Mareike Hummert, PhD candidate, Institute of Hygiene, Münster University Hospital
 - The grey water footprint of human and veterinary pharmaceuticals, Lara Wöhler, PhD candidate, Water Management, University of Twente
 - How predictable are pharmaceutical loads in wastewater treatment plant influents and effluents?, Gunnar Niebaum, PhD candidate, Institute of Environmental Systems Research, Osnabrück University
 - Representation of GREAT-ER simulations in the WIS: Georeferenced modelling as complementary approach to environmental Monitoring, Volker Lämmchen, PhD candidate, Institute of Environmental Systems Research, Osnabrück University
 - Plasma-activated water (PAW) and UV/H₂O₂ treatment in contaminated water matrices, Martien Graumans, PhD candidate, Radboud University Medical Center
 - The pollution of veterinary antibiotics within freshwater: An assessment of the pathways and the efficiency of reduction measures with help of VANTOM, Pieter Brouwer, Master student, Water Management, University of Twente
- 14:00 Guided walk through the city of Zwolle
- 15:00-17:30 Innovation market with MEDUWA partners
Themes: water governance, human and veterinary health
- 19:00 Social dinner, Restaurant Vidiveni, Jufferenwal 17, Zwolle



Agenda 13 February 2020

MEDicines **U**nwanted in **WA**ter

Bilderberg Hotel Wientjes, Stationsweg 7, Zwolle

- 8:30 Registration & refreshments
- 9:00 Welcome & review of agenda, [Raissa Ulbrich](#), MEDUWA Project Manager
- 9:05 Presentation & panel dialogue: Multi-resistant fungi from various human and veterinary sources, [Paul Verweij](#), [Radboud University Medical Center](#)
- 9:50 Presentation & dialogue: Climate change, water quality and human/veterinary health, [Thomas van der Laak](#), [University of Amsterdam](#)
- 10:40 Refreshment break
- 11:00 What has been achieved with & learned in MEDUWA, and recommendations for follow-up, chaired by [Marcel Tonkes](#), [Province of Overijssel](#)
- 11:45 Signing of MEDUWA Joint Declaration 2020 on the Emission of Human and Veterinary Medicines
- 12:00 - 12:55 Lunch
- 13:00 - 15:00 Tour of drinking water treatment plant, [Merijn Schriks](#) & [Janneke Paalhaar](#), [Vitens](#). with en route water management brief input, [Anke Durand-Huiting](#), [Waterschap Vechtstromen](#) & [Arjan Verhoeff](#), [Waterschap Drents Overijsselse Delta](#)
- 15:00 Refreshment break
- 15:10 Presentation & panel dialogue: Bathing in uncontrolled surface water, [Alfons Uijtewaal](#), [Stichting Huize Aarde](#); [Heike Schmitt](#), [Wetsus](#); & [Thorsten Kuczius](#), [University Hospital Münster](#)
- 16:00 Follow up projects:
New round of the Vecht(e) Strategy, [Jan-Arie van Berkum](#), [Gemeente Hardenberg](#)
New project proposal, [Alfons Uijtewaal](#), [Stichting Huize Aarde](#)
- 16:30 Concluding remarks by [WP Leads](#), chaired and summarized by [Dorothea Altenhofen](#), [NLWKN](#)
- 17:00 Farewell & refreshments





MEDicines **U**nwanted in **WATER**

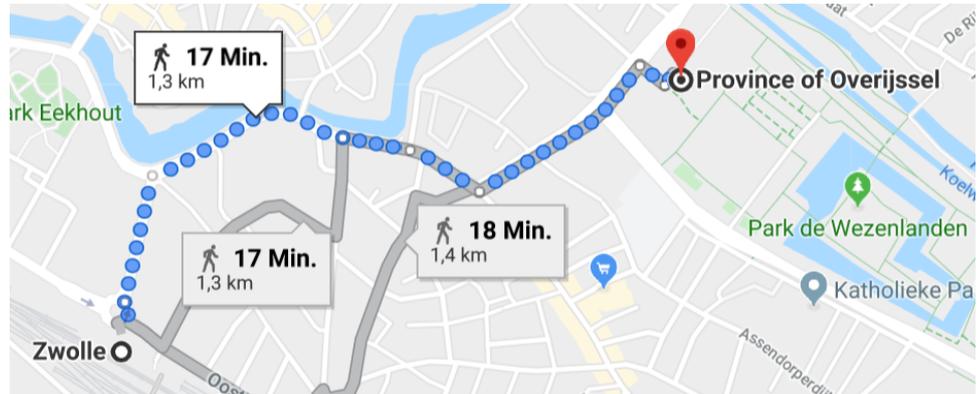
How to get there

Day 1: 12 February 2020

Venue SH&PP meeting

Provinciehuis Overijssel

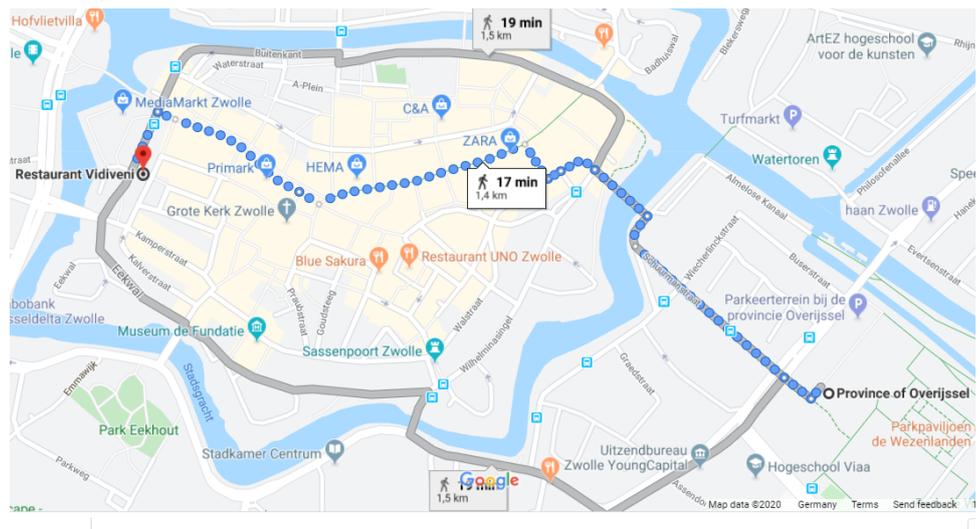
Luttenbergstraat
28012 EE Zwolle



Social Dinner, 19-21

Restaurant Vidiveni

Jufferenwal 17,
8011 LE Zwolle



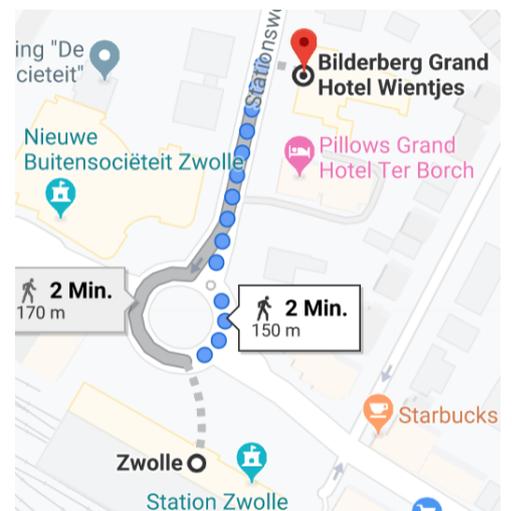
Day 2: 13 February 2020

Bilderberg Hotel Wientjes

Stationsweg 7
8011 CZ Zwolle

Further information:

<https://www.bilderberg.nl/en/zwolle/grand-hotel-wientjes/information/>





| | |
|-----------------------|---|
| Altenhofen, Dorothea | NLWKN Betriebsstelle Meppen, Lower Saxony State Office for Water Protection, Coastal and Nature Conservation Meppen District |
| Amador, Margarita | Stichting Huize Aarde |
| Bakker, Willem | Sport Fishing Oost-Nederland |
| Bauer, Vinzenz | Chamber of Agriculture Lower Saxony |
| Bijl, Dick | ISDB, International Society of Drug Bulletins |
| Boerman, Bert | Province of Overijssel |
| Buijs, Jelmer | Buijs Agro Services |
| Bregoli, Francesco | Radboud University |
| Brouwer, Pieter | University of Twente |
| Czernik, Franziska | Osnabrück University |
| Deperink, Josephine | Novaris |
| Derksen, Anja | AD eco advies |
| Dobs, Claudius | Frischer Film |
| Duarte, Daniel | Radboud University |
| Durand-Huiging, Anke | Vechtstromen Regional Water Authority |
| Feil, Herman | Alloksys Life Sciences BV |
| Fischer, Julian | a tip: tap e.V. |
| Füllgrabe, Malte | Frischer Film |
| Futselaar, Harry | Saxion University of Applied Sciences |
| Glasner, Corinna | University Medical Center Groningen |
| Graumans, Martien | Radboud University Medical Center |
| Groot, Maria | Wageningen Food Safety & Research |
| Havinga, Paul | Novaris |
| Heerema, Jacqueline | Satellietgroep |
| Herzog, Laura | Osnabrück University |
| Hilling, Frederik | Geoplex GIS GmbH |
| Höfer, Jonas | Frischer Film |
| Hofman-Caris, Roberta | KWR Water Research Institute |
| Hogeboom, Rick | University of Twente |
| Hummert, Mareike | UKM Münster, Institute for Hygiene, University Medical Center Münster |
| Jongerden, Ico | Opporren |
| Keizers, Judith | GGD Twente / Municipal Health Service Twente |
| Kistemaker, Louisa | Osnabrück University |
| Klasmeier, Jörg | Osnabrück University |
| Kramer, Annemarie | Rijn and IJssel Regional Water Authority |
| Kuczus, Thorsten | UKM Münster, Institute for Hygiene, University Medical Center Münster |
| Lämmchen, Volker | Osnabrück University |
| Leenders, Paul | VitalFluid |
| Leenen, Imke | H2Oké Water & Health Consultancy |
| Lievers, Erik | Vechtstromen Regional Water Authority |
| Lohmann, Bernadette | Zuiderzeeland Regional Water Authority |
| Mantingh, Margriet | WEFC Netherlands, Women Engage for a Common Future |



| | |
|-------------------------|--|
| Mian, Paola | MST, Medical Spectrum Twente |
| Moermond, Caroline | RIVM, National Institute for Public Health and the Environment Netherland |
| Münstermann, Frank | Kreis Borken |
| Niebaum, Gunnar | University Osnabrück |
| Noldus, Lucas | Noldus Information Technology BV |
| Odink, Herman | WDOD, Waterschap Drents Overijsselse Delta / Regional Water Authority Drents Overijsselse Delta |
| Paalhaar, Janneke | Vitens |
| Peters, Cornelis | Europa Ayurveda Center |
| Ragas, Ad | Radboud University |
| Roestenberg, Timo | Demcon |
| Rudolph, Cornelia | European Commission |
| Scheepers, Paul | Radboud University Medical Center |
| Schlicker, Richard | Geoplex GIS GmbH |
| Schmitt, Heike | Wetsus |
| Schriks, Merijn | Vitens |
| Stadlander, Michelle | GGD Twente / Municipal Health Service Twente |
| Stam Lieneke | Stichting Huize Aarde |
| Starke Svenja | Microganic GmbH |
| Stenuick, Jean-Yves | Health Care Without Harm (HCWH) Europe |
| Streng, Barbara | BUND - Friends of the Earth Germany, Office Grafschaft-Bentheim |
| ter Haar, Jan | Stichting Huize Aarde |
| ter Horst, Caroline | Saxion University of Applied Sciences - International Water Technology |
| ter Laak, Thomas | KWR Water Research Institute / University of Amsterdam, Institute for Biodiversity and Ecosystem Dynamics |
| Tonkes, Marcel | Province of Overijssel |
| Uijtewaal, Alfons | Stichting Huize Aarde |
| Ulbrich, Raissa | Osnabrück University |
| Ungermann, René | InProSens UG |
| van Berkum, Jan-Arie | Municipality of Hardenberg |
| van Bers, Caroline | The Integrated Assessment Society (TIAS) |
| van de Vusse, Annemarie | Vusse Milieuadvies |
| van Druten, Jerry | Province of Overijssel |
| van Erp, Piet | Vechtstromen Regional Water Authority |
| van Gelderen, Janco | Province of Utrecht |
| van Heijningen, Martijn | Osnabrück University |
| van Woerkom, Menno | IVM, Dutch Institute for the Rational Use of Medicine |
| Verhoeff, Arjan | Regional Water Authority Drents Overijsselse Delta |
| Verweij, Paul | Radboud University Medical Center |
| Vissers, Marc | Sweco Nederland |
| Wiegman, Wilfred | Regional Water Authority Drents Overijsselse Delta |
| Woldringh, Stéphanie | Euregio/Cross-Border Platform for Regional Water Management |
| Wöhler, Lara | University of Twente |
| Zwikker, Hanneke | IVM, Dutch Institute for the Rational Use of Medicine |



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Sampling in Nordhorn
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Bridge jumping in Dalfsen
© Alfons Uijtewaal



de Haandrik canal and Vechte River
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