



Project sewage surveillance

Initiated by KWR

- Evaluation of sewage surveillance of SARS-CoV-2
- Integration in national surveillance?
- Now: influent + effluent
- Partners: Water Authorities, STOWA,...
- Status: running



International collaborations/contacts

Networks - Global

Watershare

- Webinar

Global Water Research Coalition

- Webinar, discussion site
- WRF: COVID-19 sewage surveillance webinars (Apr 16) and summit Apr 27, with KWR

International Water Association

- Task force: information sharing, webportal
- Webinar
- Health-Related Water Microbiology Specialist Group

Global Water Pathogens Project (Gates Foundation)

- Global virus in water model (MSU, KWR, WUR)

Michigan State University



Communication

NL + International

- Support Water utilities
- Support international networks: IWA, Water Research Foundation, Global Water Research Coalition
- Bilateral requests

- Webinars (Watershare, IWA, Water Research Foundation, IWRA, BTO)

- Q&A website
- News: NL, international



Project proposal TKI Tertiary treatment

Tertiary wastewater treatment

- Evaluation of capacity of UV, UV/ox, ozone, membranes (already evaluated for pharmaceuticals) to remove antimicrobial resistance, viruses, bacteria
- Partners: van Remmen UV, Xylem, NXF filtration, water utilities, water authorities, Stowa, KWR
- Plan: literature, lab tests, field pilot tests
- Status: proposal (submitted)



Project proposal TKI: high res sewage surveillance

Sewage surveillance at high resolution (both underground and above ground) to accurately link the surveillance systems and determine if it can be used to upstream in the sewer network to identify hotspots

- Evaluation of sewage surveillance of SARS-CoV-2 compared to population study, syndromic surveillance and virus surveillance in the population at a high resolution
- Also: inactivation of virus (signal), infectivity?, presence in sludge, aerosols?
- Partners: Erasmus MC, Partners4UrbanWater, Water Authorities, STOWA,...
- Status: proposal (submitted)

RHDHV / KWR Collaboration for Wastewater Based Epidemiology

Enhancing Society Together

01 april 2020

Personal



Short term:

Intelligent dashboard to visualize community level health based on wastewater epidemiology for public health authorities



Long term:

Community Health Monitoring

Drug use tracking

Emerging contaminant tracking

Outbreak tracking

Antibiotic resistance

Primary Stakeholders



RHDHV

BL Digital

BL Water



KWR



Water Authorities (NL), Wastewater treatment plants (RoW)



RIVM (NL), Public health authorities (RoW), **WHO**

Roles & Responsibilities



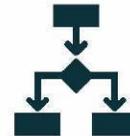
KWR

Research and
Development
Testing technology
iteration
Knowledge partner



RHDHV

Product developers
Stakeholder engagement
Scaling
Project Management



RIVM

End users
Decision makers
Data input



Water Authorities

Sample testing
Data input



International collaborations/contacts

EU 1

- EU/Uganda
 - EDCTP: Mobilisation of funding for COVID-19 research in sub-Saharan Africa
 - Parties: KWR, IHE, University of Barcelona, Uganda Min. Water, Min. Health, National Water and Sewerage Cooperation, Kampala
 - Status: proposal submitted
 - KWR: Main applicant
 - [Link to Gates Foundation K2P Global Water Pathogen Project](#)



International collaborations/contacts

EU 2

- European Commission
 - Europe-wide snapshot of COVID-19 via sewage surveillance
 - Parties: JRC
 - Status: JRC proposed to EC



International collaborations/contacts

Bilateral project proposal development 1

- Sweden
 - Main party: KTH
 - Status: proposal submitted for sewage surveillance
 - KWR: consortium partner
- South Africa (I)
 - Main party: South Africa Water Chamber
 - Status: seeking funding for sewage surveillance
 - KWR: advisory and expert role, support in setting up and devising sampling strategy



International collaborations/contacts

Bilateral project proposal development 3

- Belgium
 - Monitoring for Aquafin
 - Research proposal
 - Main party: Uni Ghent
 - Status: Preparing proposal for FWO (eq. to NWO)
 - KWR: Consortium partner, expert/advisory role



International collaborations/contacts

Bilateral project proposal development 4

- Australia
 - Main party: Water & Health Ltd
 - Status: sewer model COVID-19 collaboration being set-up



International collaborations/contacts

Bilateral project proposal development 5

- Germany
 - Main party: TZW
 - Status:
 - Proposal for WW monitoring in various locations to DVGW
 - KWR:
 - Provide expertise/support in method
 - Share data and samples

Location of institutes (planning) sewage surveillance of COVID-19

