



UN 2023 Water Conference Side Event

Wastewater surveillance for public health monitoring: Using the one-health approach to meeting the SDGs

24.03.2023, 11:00 am -01:00 pm, Turkish House

Organized by:

Ministry of Health of Türkiye

Partners:

SUEN, WWC, Marmara Univ. Env.Eng. Dept., EC, UNEP, WHO, KWR, WRC, WISA, Veolia, CDC, RIVM, THL, NICD, Bill & Melinda Gates Foundation, World Bank

Background on the event (one paragraph)

Wastewater-based surveillance (WBS), risen to prominence during Covid-19, is a promising tool for public health monitoring enhancing co-operation among water networks, health experts and policy-makers. This new epidemiological surveillance method is embedded in SDG 6- access to adequate sanitation and hygiene - and contributes to realizing a healthy life for all, as envisaged under SDG 3. Through this side event, the organizers aimed to raise awareness around the added benefits of wastewater-based surveillance and enhance co-operation between water and environmental networks with health experts such as communicable disease practitioners. The event also aimed to explain the added benefits of integrating wastewater-based surveillance into funding calls. At an institutional and government level, aimed to foster collaboration between water service providers and health institutions, and encourage surveillance on communicable and non-communicable disease. Finally, the event gave the opportunity for experts and policymakers to highlight best practices on the use of wastewater-based surveillance to detect waves of Covid-

19 and targeted expansion of wastewater surveillance to other relevant public health indicators, such as infectious diseases (incl. viruses, bacteria, parasites, fungi), AMR and chemicals.

Water Action Agenda (one paragraph, if possible, please include the link to your commitment in the Water Action Agenda database)

The side event contributes to the Water Action Agenda by emphasizing the importance of the integration of tools for wastewater and environmental quality-based surveillance, as a resource for relevant public health indicators, such as infectious diseases (incl. viruses, bacteria, parasites, fungi), AMR and chemicals and triggering action and potential financial resource for national monitoring systems.

Key Issues discussed (5- 8 bullet points Key Issues discussed (5- 8 bullet points)

1. the progress and successes of wastewater surveillance for SARS-CoV-2 to support public health, i.e., the positive change of paradigm around the wastewater narrative, from a wasted resource to a valuable tool for public health monitoring.
2. wastewater surveillance as a tool to support public health decisions on a variety of public health issues (e.g polio, cholera, typhoid, illicit drugs, antimicrobial resistance and contaminants of emerging concern).
3. the methodological developments in wastewater-based surveillance.
4. the contextual applications and adaptations of wastewater-based surveillance in low-, middle- and high-income countries , including sewerred and unsewerred contexts.
5. Future prospects for wastewater surveillance
6. A global wastewater sentinel initiative that will provide partnership between authorities, public sectors and private sector

Key recommendations for action (5 - 6 bullet points)

1. Define wastewater surveillance strategies to contribute to public health preparedness and response (e.g. establish priority pathogens for different settings, sampling location and frequencies, ways for integration with clinical surveillance)
2. Integration of wastewater and environmental quality-based surveillance as a tool for public health monitoring for priority pathogens in priority settings ;
3. Need for triggering action and financial resources for national monitoring systems;

4. Extension of wastewater surveillance studies for targets which may be of national, regional or global interest (e.g ARM, chemicals) and setting-up a global wastewater sentinel initiative that will provide partnership between authorities, public sectors and private sector
5. Integration of wastewater surveillance studies to national emergency action plans for earthquakes etc. to ensure quick and fast detection of possible epidemics
6. Need for developing and implementing capacity building training for wastewater surveillance including public private partnership, expertise sharing and management of the WWTW and support the establishment of surveillance on a global level