



WRC WORLD ENVIRONMENTAL HEALTH DAY WEBINAR

THEME: ENVIRONMENTAL HEALTH, A KEY PUBLIC HEALTH INTERVENTION IN DISEASE PANDEMIC PREVENTION

Date: 23 September 2020

Time: 09:00 AM – 12:00 PM (South African Time)

Background

The 26th of September of every year has been declared World Environmental Health Day by the International Federation of Environmental Health. The purpose of this day is to recognize the importance of the environment as a major determinant of our health and wellbeing. The theme for this year's celebration is **ENVIRONMENTAL HEALTH, A KEY PUBLIC HEALTH INTERVENTION IN DISEASE PANDEMIC PREVENTION**. Water and wastewater is well recognized as one of the natural indicators on the status and health of the environment. Environmental surveillance, through the continuous monitoring and profiling of water and wastewater sources for substances that can serve as indicators or biomarkers of the collective status of environmental health (or stress/disease) is increasingly being used worldwide for detecting and avoiding emerging and unrecognized hazards that may cause health disparities and for guiding forensic investigations of cause-effect linkages involving communities and stressors. This approach is based on the fact that any substance (e.g. infectious agents, illicit drugs, food or environmental toxicants) that may be present in the environment will be washed into the aquatic system, either directly as runoff or via excretion by humans/organisms. The ongoing pandemic of coronavirus disease 2019 (COVID-19) is a public health emergency of international concern. A number of countries around the world have initiated environmental surveillance programmes for SARS-CoV-2 (the causative agent for COVID-19) to serve as an early warning tool and complementary approach to track the prevalence of infections in communities. Besides COVID-19, environmental surveillance has been used for polio, hepatitis, etc. Apart from disease surveillance, a number of water fingerprinting applications have very recently been tested and published. Some of the examples include: detecting and monitoring drugs and counterfeit pharmaceuticals use and abuse; tracing the source of pollution and wastewater inflow into raw and drinking water sources and comparing the environmental health status of different geographic areas. The aim of this event is to share the latest science on environmental (water and wastewater) surveillance as a fundamental component of a comprehensive public health system and to explore new environmental surveillance applications as means of strengthening the existing surveillance systems for forensics research and environmental health assessment, as well as for developing early warning systems based on the new concepts and techniques.

FINAL PROGRAMME

Chairs - **Dr Nonhlanhla Kalebaila, WRC** (nonhlanhlak@wrc.org.za)

Dr Eunice Ubomba-Jaswa, WRC (euniceuj@wrc.org.za)

Time		
09:00-09:05	Opening and Welcome – Mr Dhesigen Naidoo, CEO, Water Research Commission (WRC)	
09:05-09:15	Setting the scene – Mr Jay Bhagwan, Executive Manager, WRC	
09:15-09:30	Keynote Address 1 Environmental health monitoring in South Africa – Mr Wayne Horward, National Institute of Communicable Diseases (NICD)	
09:30-09:50	Keynote Address 2 Global practices on environmental surveillance for public health tracking and forensics - Prof. Barbara Kasprzyk-Hordern, Environment & Analytical Chemistry, University of Bath	
09:50-11:30	Presentation of South African Environmental Surveillance Case Studies <ul style="list-style-type: none"> • Environmental surveillance of SARS-CoV-2 and other infectious pathogens – Prof. Renee Street, Medical Research Council (MRC) • Wastewater analysis for the assessment of emerging water quality threats - Dr Noncy Gomba, National Institute for Occupational Health (NIOH) • Environmental monitoring of cholera and response guidelines – Prof. Anthony Okoh, University of Fort Hare • Using wastewater surveillance for forensic intelligence: monitoring substance abuse – Dr Edward Archer, Stellenbosch University 	
11:30-11:45	Open discussion	ALL
11:45-12:00	Summary and closure	Mr Jay Bhagwan, Executive Manager, WRC