ADB

Pacific WASH Webinars

Utilities and public health authorities across the Pacific are coordinating efforts to prevent the spread of COVID-19. The Asian Development Bank's (ADB) Pacific WASH Technical Advisory Team supports the region's water sector and health authorities to upgrade wastewater management practices to provide greater capability in detecting and managing COVID-19.

Event details:

Wastewater Surveillance – Helpful in the Pacific for COVID-19 Response and Beyond
1 October 2021

Presenters and Panelists:

- **Rachael Poon**
  Principal Scientist
  Department of Health, Victoria, Australia
- **Tiffany Chen**
  Senior Networks Operations Engineer, Sydney Water, Australia
- **Melody Lau**
  Scientist, South Australia Water, Australia
- **Dr. Sudhir Pillay PhD**
  Research Manager, Water Research Commission, South Africa
- **Dr. Monica Nolan, MBBS, MPH**
  Principal Public Health Officer, Department of Health, Victoria, Australia
- **Marlene Hsu**
  Research Manager, Water Research Australia, Australia
- **Dr. Daniel Deere PhD**
  Water, Sanitation, Hygiene Specialist, Water Futures, Australia

Event recording and resources available here.

Webinar Overview

Early in 2020, the ADB announced its intention to support the Asia Pacific region in its response to the pandemic. In October 2021, the ADB hosted a virtual COVID-19 wastewater surveillance webinar in association with the Pacific Water and Wastewater Association (PWWA), attended by over 30 participants from 11 countries across the Pacific region. Presented by a panel of international experts providing public health, utility, laboratory, and developing country perspectives, the webinar offered practical advice for the design and effective operation of a COVID-19 wastewater surveillance program to inform a public health response to COVID-19 disease transmission. The webinar included a Q&A session to answer specific audience questions about how to apply wastewater surveillance practices in the Pacific, both now and in the future.

The webinar responded to these key questions:

- ❖ What factors should you consider before implementing COVID-19 surveillance in your jurisdiction?
- ❖ What are the best practice methods to detect COVID-19 in wastewater?
- ❖ How do public health authorities identify at-risk communities and optimize wastewater sampling?
- ❖ How do all the relevant agencies work together to manage public health requests, sampling, laboratory results, and public communication?
- ❖ What are the best methods to coordinate and manage laboratory testing and the release of results across government agencies?
- ❖ How has wastewater based epidemiology provided benefits in a developing country context

Workshop Outputs

Presentation Topics

Public health authority	Utility	Laboratory	Wastewater epidemiology
• Early warning systems • Risk-based surveillance • Sampling management • Protecting vulnerable communities • Communicating results	• End-to-end sampling process • Evidence-based sampling techniques • Selecting sampling sites • Communicating across agencies • Critical role of utilities in disease detection	• Laboratory workflow • Equipment options to maximise results • Managing positive and negative results • Detection to manage a range of public health outcomes	• Why invest in wastewater based epidemiology? • Wastewater detection options in sewered and non-sewered environments • Steps to develop national surveillance programs

Source: Department of Health (Victoria), Sydney Water, South Australia Water, Water Research Commission/

Case Studies

Webinar presenters shared international case studies demonstrating the value of best practice wastewater surveillance. **The Department of Public Health (Victoria, Australia)** presented a case study of early detection of COVID-19 in wastewater, before the diagnosis of the first confirmed case in the town of Shepparton. **Sydney Water** presented techniques and typologies used to identify and isolate COVID-19 detection in wastewater mapped to wastewater treatment plants and specific localities. **South Australia Water** identified laboratory equipment and testing techniques to avoid staff contamination and the workflow to manage both confirmed and unconfirmed COVID-19 cases. **The Water Research Commission** presented the case for investing in wastewater-based epidemiology for public health management across a range of diseases and public health profiles.

Learning Snapshots

- **COVID-19 has established wastewater based epidemiology as a critical step in public health management.** The techniques to detect and manage COVID-19 can be applied to other public health profiles to achieve improved community health outcomes.

- **Coordination is an important step in communicating testing results**. Establishing communication protocols between agencies will improve the speed and accuracy of testing outcomes to contain COVID-19 transmission and provide an early warning system of likely COVID-19 hotspots.

- **Communicate results to the public**. By communicating early and frequently, public health authorities can demonstrate the value of wastewater testing in limiting disease transmission and encourage the public to comply with public health orders.

Upcoming Events

To register for the upcoming 2021 webinar topics, please contact: llfernando@adb.org

Topic	Date
Climate Change Impacts on Utility Operations	November 2021
Non-Revenue Water	December 2021

ADB continues to support water service providers in the region to build resilience, capacity and knowledge to manage threats in our changing world.