#ADBWaterWatch
WEBINARS BY THE ADB WATER SECTOR GROUP

ADB WATER AND DELTARES SEMINAR SERIES

Collaborating on Innovative and Sustainable Solutions for Integrated Water Management

Following a successful seminar series with WaterAid on water, sanitation, and hygiene (WASH) and health in the context of the pandemic, the ADB Water Sector Group is collaborating with Deltares, an independent Netherlands-based knowledge institute, to bring attention to the issues of water resources management.

In five webinars, Deltares will share its expertise and tools to facilitate innovative and sustainable solutions pertaining to the use and risks of water and soil. This knowledge sharing can help inform project design and implementation in ADB developing member countries.

PART 1

Resilient City Toolbox for Urban Resilience Planning
11 August 2020, 3:00–4:00 p.m. (GMT +8)

PART 2

Understanding Disease Transmission and Health Risks through Water Systems
25 August 2020, 3:00–4:00 p.m. (GMT +8)

PART 3

Dynamic Adaptive Policy Pathways and Climate Adaptation
8 September 2020, 3:00–4:00 p.m. (GMT +8)

PART 4

Yellow River – A Hydrological Basin Approach
22 September 2020, 3:00–4:00 p.m. (GMT +8)

PART 5

The Future of Hydrological Forecasting
6 October 2020, 3:00–4:00 p.m. (GMT +8)

ADB Deltares

Resilient City Toolbox for Urban Resilience Planning

**11 August 2020
3:00–4:00 p.m. (GMT +8)**

Urban societies and economies are increasingly vulnerable to extreme weather due to climate change, ongoing urbanization, and densification. To reduce the risks to acceptable levels, urban resilience needs to be strengthened. Implementation of adaptation measures, however, is challenging.

During this seminar, a web-based system, 'The Climate Resilient City Toolbox' (CRCT), will be demonstrated, which supports collaborative spatial planning of adaptation measures and/or explores alternatives for a resilient and attractive urban area. Numerous blue-green and grey measures can be taken to achieve this goal and improve livability; however, usually, at a price in terms of money and space. Many experts and stakeholders are unaware of the numerous ecosystem-based adaptation solutions available. Learn how a well-balanced plan can best be co-created by multidisciplinary teams and stakeholders in the conceptual phase of planning. A customized CRCT used in an ADB prefeasibility study of ecosystem-based adaptation measures for Nur Sultan (Kazakstan) and Xiangtan (People's Republic of China) will also be discussed.

ABOUT THE SPEAKER Frans van de Ven

Dr. Frans van de Ven is leader of the Urban Land and Water Management team at Deltares and associate professor of Urban Water Management at Delft University of Technology.

He holds a PhD in Hydrology and is leading research worldwide on creating sustainable cities, making them climate-resilient, flood- and drought-proof, and subsidence-free. This includes research on improved concepts for urban flood and water management, other ways of urban planning and design and water quality control, blue-green solutions, and energy harvesting from water.

PART 2

Understanding Disease Transmission and Health Risks through Water Systems

25 August 2020
3:00–4:00 p.m. (GMT +8)

The environment and our health are intimately linked, both directly and indirectly. In this second part of the series, Eline Boelee, an interdisciplinary scientist in water-health-ecosystems interlinkages, will discuss whether health can be improved by forecasting the risks and spread of diseases through different water systems and how we can reduce health risks through improved water management in urban, rural, and marine ecosystems.

She will address three priority questions:

1. How to predict effects of environmental change on vector-borne diseases?

2. What are the future health risks under extreme weather, and can we develop early warning for waterborne pathogens?

3. What is the health burden of water management?

ABOUT THE SPEAKER **Eline Boelee**

Dr. Eline Boelee is a scientist in water-health-ecosystems interlinkages, with experience in health and environmental impacts of water resources development; agricultural and domestic water use and management; ecology and environmental control of water-related diseases; multiple use water services; the water-energy-food nexus; water quality; and ecosystem services in agroecological landscapes.

She has led many international multidisciplinary research projects on improved planning and management of water resources development to enhance health and environmental sustainability.

Dynamic Adaptive Policy Pathways and Climate Adaptation

8 September 2020
3:00–4:00 p.m. (GMT +8)

Many investments and policy decisions in water management have significant and often long-term consequences. At the same, there are investments being made that influence adaptation requirements and long-term options to adapt. Therefore, making sound near-term decisions is critical—unfortunately, we live in an increasingly unpredictable dynamic world governed by competing and changing beliefs and preferences.

When decision makers and analysts face a deeply uncertain future (e.g., due to climate change), they need more than traditional prediction or scenario-based decision methods to help them to evaluate alternatives and make decisions.

In this seminar, Deltares' Marjolijn Haasnoot will present an approach to support the development of an adaptive pathways plan that supports decision-making under deep uncertainty. Exploring pathways is an emerging approach around the world. She will illustrate its use for climate adaptation and supporting climate resilient economic development, as well as provide lessons from 10 years of pathways studies in practice.

ABOUT THE SPEAKER   Marjolijn Haasnoot

Dr. Marjolijn Haasnoot is an environmental scientist specializing in water management and integrated assessment modeling and decision making under deep uncertainty. She is the initiator of the Dynamic Adaptive Policy Pathways approach. Her current research focuses on (adaptive) delta management and planning and climate change adaptation. Model-based adaptation pathways, fast integrated models, and signals for timely adaptation are key tools in this research. She is a lead author of the 6th Assessment Report of the IPCC.

Yellow River – A Hydrological Basin Approach

**22 September 2020
3:00–4:00 p.m. (GMT +8)**

Water managers are continuously making decisions to guarantee water safety. These decisions relate to the short term; for example, ongoing droughts or when there is a risk of flooding. But these decisions can also affect the long term given the more extreme weather events caused by climate change. All these decisions have one thing in common: they are often grounded on results from hydrological models.

During this seminar, a possible hydrological basin approach for the Yellow River in the People's Republic of China will be presented, and a distributed hydrological model as part of an open source modeling platform for hydrological simulations will be demonstrated. Various examples of its applications for modeling hydrological extremes under present and future climate, modeling effects of reservoirs, and/or sediment in large river basins will be shown.

ABOUT THE SPEAKER Albrecht Weerts

Dr. Albrecht Weerts is an expert on data model integration and hydrological forecasting at Deltares. Albrecht investigates the predictability of the hydrological system, which is driven by weather and climate. The aim of the research is to improve predictions of hydrological processes at different spatial and temporal scales. Improved prediction can help water managers, crisis managers, and policymakers to make informed decisions about reducing risks and impacts of future floods and droughts.

The Future of Hydrological Forecasting

6 October 2020
3:00–4:00 p.m. (GMT +8)

Real-time flood forecasting is one of the most effective flood risk management measures. Many governments operate bespoke hydrological forecasting services that continuously monitor and forecast coastal and fluvial water levels.

However, given the rapid advancements of artificial intelligence, cloud computing, and other emerging technologies, the big question is: How will these affect the hydrological forecasting domain?

For Deltares, they wanted to have some idea of what the world will look like in 2025 in order to guide their investment decisions and ensure that their tools and expertise remain "state-of-the-art". In the last webinar of the series, the presentation will provide insights into plausible future scenarios for the hydrological forecasting domain and the way in which Deltares adapts their tools and expertise accordingly.

ABOUT THE SPEAKER ## Nadine Slootjes

Nadine Slootjes is the Manager for Water Operations and Early Warning at Deltares. With a group of 35 water and IT developers, she is responsible for the development and delivery of state-of-the-art information technology solutions in water management. Flood forecasting and warning systems (Delft-FEWS) and real-time control systems (RTC-Tools) are an essential element in regional and national water management. The team operates globally and assists national and regional water authorities to optimize their water operations and real-time decision-making.