

## 29 June 2021 (Tuesday)

4.00pm-5.30pm (SGT) (GMT +8)

### Session 4.5 – Basin Connected Cities

**Session Chair(s): Tao Li, International Water Association (IWA)**

#### **Basin-Connected Cities: Moving From Vision To Action**

K. Cross. IWA (Thailand)

*Presenter is an invited speaker. No executive summary is available*

#### **Bangladesh Delta Plan 2100: Bangladesh In The 21<sup>st</sup> Century**

G. Choudhury. Bangladesh Delta Plan 2100 Formulation Project (Bangladesh)

Bangladesh delta, the largest dynamic delta of the world, faces rigorous challenges like increased flooding, freshwater unavailability, drought, groundwater decline, erosion, sedimentation, retarded drainage, waterlogging, salinity intrusion, deteriorated water quality, decreased trans-boundary water flows, sea-level rise, increased frequency of cyclonic storm and associated surges, etc. Other challenges are population growth, rapid industrialization, and unplanned urbanization. In view of long-term challenges presented by climate change and natural hazards, the Government has formulated a techno-economic, long-term holistic, water-centric integrated Bangladesh Delta Plan 2100. It is the first country in the world to develop a comprehensive 100-year plan for its entire delta for 'achieving safe, climate-resilient and prosperous delta' for a period up to 2100. Its mission is to ensure long-term water and food security, economic growth, environmental sustainability, while effectively coping with natural disasters, climate change and other delta issues to robust, adaptive and integrated strategies and equitable water governance.

#### **An Integrated Approach To Coastal Climate Resilience**

A. Hosking, J. Bird, P. King, M. Wilson, C. Schelpe, C. Clifton. Jacobs (United Kingdom)

Coastal cities globally face many challenges in delivering a safe, affordable and resilient environment for their residents and economy. Added to the pressure of increasing populations and aging infrastructure, is the accelerating impact of climate change, which in the coastal context includes the challenge of sea level rise and coastal storms. Whilst these are essentially independent challenges, they manifest in impacts, such as flooding, to the places and assets used by communities and businesses. Focusing on resilient outcomes for these places, drives us towards a more integrated approach whereby these challenges are addressed in the context of the wider needs and objectives of the affected areas. Drawing lessons from major coastal city resilience programs around the world, the paper describes how multi-disciplinary approaches support the delivery of comprehensive resilience outcomes, beyond their core flood risk management drivers.

## **The Integration Of Infrastructure Hardening And Longer Term Equitable Resilience Strategies In The New York City And New Jersey Region**

E. Westerhof. Arcadis U.S., Inc. (United States)

The tidally influenced NY/NJ Hudson River is a coastline environment and a coastal watershed that supports one of the densest inter-connected infrastructure assets in the US. The extensive transportation infrastructure that supports the daily mobility of millions of daily commuters and drives the national economy is extremely vulnerable to natural hazards. Hurricane Sandy in 2012 disrupted not only the transportation and grid infrastructure, it triggered an array of cascading impacts. Both New Jersey (NJ) and New York (NY) have adopted an approach to harden their critical assets, in conjunction with longer term planning efforts with several billion dollars in capital expenses. Multi-purpose levees, flood gates and tunnel closure systems are being designed and installed to safeguard daily commuters and New York's global business interests. Social Cost Benefit Analyses helps guide the extremely complex resilience transformation, allowing the city to allocate benefits to specific stakeholders and develop a state-of-the-art coastal plan that is inclusive and equitable.