

Event details

Title	Towards Resilient Water Systems
Date	24 March 2021
Speakers	<ul style="list-style-type: none">▪ Geoff Wilson, <i>Senior Water Resources Specialist, Asian Development Bank</i>▪ Hisaka Kimura, <i>Advisor, Private Sector Operations Department, Asian Development Bank</i>▪ Jelle Beekma, <i>Senior Water Resources Specialist, Asian Development Bank</i>▪ John Matthews, <i>Executive Director, Alliance for Global Water Adaptation</i>
Discussants	<ul style="list-style-type: none">▪ Amit Singh, <i>consultant</i>▪ Medani Jayakody, <i>Chief Engineer, Water Resources Planning, Department of Irrigation, Government of Sri Lanka</i>
Moderator	<ul style="list-style-type: none">▪ Coral Fernandez Illescas, <i>Principal Water Resources Specialist, Asian Development Bank</i>



Source: ADB.

Overview **Building water system resilience beyond infrastructure**

The second session of the Virtual Dialogues on Resilient Infrastructure sector series explored innovation and opportunities towards achieving resilient water infrastructure and systems in ADB's Developing Member Countries.

Season 02: Dialogue 02 Summary

John Matthews introduced the session, highlighting that achieving resilience will require shifting beyond static targets or a single vision of a sustainable future, to navigating multiple possible futures. In water management decision-making, the past is a very poor predictor of the future. Resilience is not always about 'new' approaches, with the example provided of Dujiangyan irrigation facility in Sichuan Province, People's Republic of China. Designed in 250 BCE, this adaptive ancient system has been able to meet shifting uses and a changing climate for over 2,000 years.

The first 'burst' speaker, Geoff Wilson, shared the importance of building resilience to floods, rather than resisting floods. This requires flood risk management infrastructure, including nature based solutions and providing room for the river. But just as importantly – it requires strong institutions to implement resilient land use planning, building codes, community risk management, operation and maintenance, contingency planning, and capacity building. Geoff also highlighted the importance of making room for the river, and the emerging role of disaster risk financing in managing residual risks and building back better following flood events.

Reflecting on Geoff's burst talk, Amit Singh highlighted the many challenges faced by Pacific nations in building resilience to floods. These challenges include fragmentation of roles and responsibilities of agencies; limited water management legislation; gaps in institutional and technical capacity; data constraints (including flood risk mapping); and gaps in local flood management planning and capacity. An integrated approach to flood risk management key to enhance governance in the region.

The second burst talk was provided by Jelle Beekma, who discussed protective irrigation, water harvesting and watershed management, and efficient drainage for salinity control to enhance drought resilience. Jelle highlighted the importance of ensuring that drought resilience solutions are closely aligned with national development priorities. For example, ADB's Viet Nam Water Efficiency Improvement in Drought-Affected Provinces Project is providing localized solutions for improved and modernized irrigation, while under the India Madhya Pradesh Irrigation Efficiency Improvement Project, ADB is supporting large-scale advanced technology for drought-responsive irrigation management. Like Geoff, Jelle highlighted the importance of looking beyond the physical to building a resilient enabling through policies, governance, management, and value chains.

The second discussant, Medani Jayakody shared insights from a wide range of drought resilience solutions implemented by the Government of Sri Lanka. These include water resource operation and management systems, water storage, and irrigation modernization, improved agricultural management practices, and water forecasting.

Season 02: Dialogue 02 Summary

The final burst talk, delivered by Hisaka Kimura, highlighted resilient water and sanitation during recovery from the COVID-19 pandemic from the perspective of ADB's Private Sector Operations Department. Following COVID-19 lockdowns, water and wastewater industries continued essential services and played a critical role in supporting communities. Digital solutions played a more important role, and new opportunities emerged to upgrade existing water plants and develop new solutions in preparation for pandemic impacts in response to changing needs. Resilience plans need to be upgraded to cope with uncertainty including supply chain disruption, unexpected demand fluctuation, longer lead time for government approvals, changes to end-user billing, and delays in commercial bank approval processes. While coping with COVID-19 is a long journey, there are many successes to learn from and opportunities to build back better.

Key Takeaways

- 1. Building resilient water systems goes beyond infrastructure to create an enabling environment.** This requires a systems approach encompassing strong and resilient financial systems, capable institutions, community planning and awareness, comprehensive planning, education, risk information (including risk mapping), and looking across the value chain.
- 2. Building resilience to floods and other hazards requires adaptive solutions** that can respond to the uncertainty associated with climate change, land use change, population change. Rather than focusing on one problem, we must consider multiple future scenarios and design flexible solutions. New approaches such as Dynamic Adaptive Pathways Planning show great promise in dealing with increasingly uncertain futures.
- 3. An integrated approach to flood risk management is key** to designing investment projects that can account for current and future risk, and overcome significant barriers faced by DMCs in relation to governance, data and capacity.
- 4. Recovery from the COVID-19 pandemic provides an important opportunity** to enhance the resilience of water systems. Private sector operational flexibility is critical to respond to changes such as those that were observed during lockdown.