

Business Unusual for Resilient Urban Infrastructure

Damaged embankment in Sharankhola upazila of Bagerhat after Cyclone Amphan
| Source: [The Daily Star](#)

EVENT DETAILS

Virtual Dialogues on Resilient Infrastructure Season 2: Dialogue 1

Business Unusual for Resilient Urban Infrastructure

25 February 2021 | via Zoom

Organized by the Urban Sector Group and Climate Change and Disaster Risk Management Thematic Group, Sustainable Development and Climate Change Department (SDCC), ADB

Speakers

- **Manoj Sharma**, Chief of Urban Sector Group, ADB
- **Alexander Nash**, Urban Development Specialist, ADB
- **Kerrie Burge**, Program Manager for RISE, Monash University
- **Matthew Savage**, Director, Oxford Consulting Partners | Consultant for TA 9217

Moderator

- **Vivian Castro-Wooldrige**, Senior Urban Development Specialist, ADB

ACCELERATING NEW WAYS OF ADVANCING RESILIENCE OF URBAN INFRASTRUCTURE

55%

of Asia-Pacific region's population will live in cities by 2030.

Asia-Pacific is home to

6 of 10

of the world's most vulnerable cities.

40%

of natural disasters occur in the region.

The webinar discussed opportunities to accelerate resilience-building in urban infrastructure development through sharing of new approaches, supported by examples, particularly those that are ready to be mainstreamed. ADB's Urban Sector Group first set the scene and was followed by presentations from three guest speakers comprising ADB operations staff and expert practitioners.

Examples were drawn from projects financed by ADB, including initiatives and pilots under the Urban Climate Change Resilience Trust Fund (UCCRTF). Breakout sessions followed for a focused dialogue with participants. Polling of participants identified nature-based solutions as the area wherein planning capacity is currently weakest.

In his scene setting presentation, Manoj emphasized that urban infrastructure must be made resilient to meet not just the host of challenges presented by rapid urbanization, but also in the context of uncertainties presented by imminent climate change and growing disaster risks, and the "new normal" introduced by the Covid-19 pandemic.

Alex Nash discussed risk-informed urban planning. He emphasized that it is more about process ("planning") than destination ("plan"). A good plan is one that adapts to new information and is "resilient" to the information being

inaccurate. These are important in the context of climate uncertainty and the multi-dimensional nature of associated risks.

Kerrie Burge discussed the role of nature-based solutions in making urban infrastructure resilient, inclusive, and sustainable using the Revitalization of Informal Settlements and their Environments (RISE) project as an example. The project is bringing water supply, sanitation and drainage services to informal settlements that are not reached by conventional city-built infrastructure. Kerrie stressed the importance of a community co-design approach to bring in indispensable local knowledge and solutions that fit the context, more effective, cost-efficient, and sustainable.

Matthew Savage talked about measuring the benefits of investing in urban infrastructure resilience. He used as case UCCRTF's work on examining the economics of urban resilience. Citing lessons from Bangladesh, he noted that resilience investments in two project municipalities there have shown positive results, in this case through reduced damage from Cyclone Amphan which struck in 2020. Matthew cautioned that the economics of resilience-building is an inexact science and is especially challenging in the context of climate uncertainty unfolding in parallel with other urban risk drivers, notably rapid population growth and growing vulnerabilities.

“ ADB estimates that Asia and the Pacific will need \$1.7 trillion per year (2016-2030) for infrastructure to maintain growth, eradicate poverty, and respond to climate change—the majority of which can be expected to be invested in cities. This is a huge challenge but it is also a huge opportunity for us to mainstream resilience in infrastructure planning and implementation. — Manoj Sharma, Chief, Urban Sector Group, ADB



UCCRTF PROJECTS

Revitalization of Informal Settlements and their Environments (RISE) | [TA 9593](#) and Grant

UCCRTF supported the pilot of the RISE project in Makassar City, Indonesia. Developed through a community co-design process, the project demonstrates the applicability of non-networked nature-based solutions as an alternative approach to the traditional large-scale trunk infrastructure to deliver basic WASH services to poor and vulnerable communities.

A parallel research led by Monash University through funding from the Wellcome Trust is collecting the first-ever rigorous scientific evidence, through a randomized control trial, of the sustainability and cost-benefits of a localized, water-sensitive approach to upgrading informal settlements for health and environment. An investment grant to be financed by UCCRTF is being prepared to replicate this in six other informal settlements in Makassar.

Measuring the benefits and co-benefits of climate investments | Part of [TA 9217](#)

This work covers the assessment of the socio-economic benefits of climate investments. It uses a model that can project economic benefits (e.g. potential avoided losses, other economic) of UCCRTF investments undertaken in target cities against a range of future climate change and development scenarios.

A case study in Bangladesh cities Bagerhat and Patuakhali was conducted to illustrate this resilience assessment work. It reviews the performance of ADB-UCCRTF investments in the context of the recent Cyclone Amphan which hit Bangladesh in May 2020. Bagerhat and Patuakhali were considered 3rd and 5th most severely impacted districts according to the initial Joint Needs Assessment. The case study highlighted that overall, the economic costs of resilience are likely to be exceeded by the benefits of avoided damages and economic development from improved urban planning and infrastructure.

URBAN CLIMATE CHANGE RESILIENCE LESSONS

“*When things go wrong, our biggest source of resilience is how well we stick together. So the question is, what are the infrastructure that strengthen social capital – what assets reduce inequality; create public goods; and a sense of community? These are the assets that increase resilience.* – Alexander Nash, Urban Development Specialist, ADB

- **Infrastructure resilience only works in conjunction with high levels of social capital** (public awareness, capacity, preparedness). Caution must be taken against creating a false sense of security from having designed the infrastructure to be more resilient, which might engender complacency and undermining of residual risks.
- **Proof of NBS concept is needed to get government buy-in** and pilots are helpful toward building up scale, preferably with initiatives embedded within a larger program involving a network of partners (inter-disciplinary practitioners, university-based researchers) and actively supported by communities as co-designers and implementors, and by local government officials as champions.
- **NBS is best presented as an alternative to traditional solutions that do not work in specific contexts**, e.g., hard-to-reach informal settlements. It should not be associated with “cheap” solutions as

compared with traditional investments. On the other hand, its cost should be cast within a broader accounting and narrative of its real benefits, direct and indirect, including community empowerment.

- **Resilience-building cannot be set apart from its institutional context**, particularly the importance of enabling policies and institutional environment. For instance, the prevailing bias toward maximizing investment volume among development finance institutions drives preference for big-ticket hard infrastructure—with less attention paid to robustness of outcomes—and needs to be corrected.
- **There is need to move away from reliance on economics towards a more holistic assessment approach** that, for example, captures vital institutional and structural considerations. Multi-criteria analysis is an alternative, though still faced with challenges in integrating cross-cutting and context-driven considerations (e.g., politics and governance), uncertainty, and metrics.
- **“Good information” is vital to investment planning for resilient infrastructure** but saddled with high uncertainty in climate and various urban development drivers. The level of uncertainty—pertaining to hazards and consequences for assets at risk—is very important in properly applying economics to infrastructure resilience. Need to test assumptions well and to review appropriateness of conventional economic appraisal frameworks, e.g., rate-of-return measures and setting of discount rates.

UCCRTF FINANCING PARTNERS



FURTHER INFORMATION

Virinder Sharma, Senior Urban Development Specialist, SDCC
Email: vsharma@adb.org

This is published under [TA 9217](#) Knowledge Management and Resilience Measurement for Urban Climate Change Resilience (UCCRTF Subproject 2)