Season 01: Dialogue 01
Summary

Event details

Title	**Towards Resilient Infrastructure**
Date	21 October 202
Speakers	▪ **Dave Brunsdon**, *Kestrel Group Limited, New Zealand* ▪ **Kotchakorn Vorrakhom**, *Porous City Network, Thailand* ▪ **Setitaia Pasivaka Chen**, *Tonga Power Limited, Tonga* ▪ **Arghya Sinha Roy**, *Asian Development Bank*
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Overview

Emerging Perspectives on Making Infrastructure Resilient

The inaugural session of the Virtual Dialogues on Resilient Infrastructure introduced **emerging perspectives** and in particular made the case for increased investments and introducing new approaches for strengthening infrastructure resilience. Such approaches include (i) adopting a systems approach in understanding of current and

future risks and uncertainties; (ii) promoting a combination of grey and green measures that are embedded in local institutions; (iii) promoting people-centered transformational approaches; and (iv) strengthening pre-disaster planning for infrastructure systems. The emerging perspectives recognize the economic benefits of investing in resilience and the opportunities stemming from COVID-19 recovery to improve resilient infrastructure systems.

Lessons from the 2011 and 2016 earthquakes in **New Zealand** highlight the importance of technical and organizational solutions for building resilient infrastructure. At a technical level, strengthening resilience of infrastructure is guided by qualities such as robustness and redundancy, especially for critical infrastructure such as highways and bridges, water supply and sanitation, and telecommunication networks. At an organizational level, the emphasis should be to strengthen relationships between and among different agencies at national and local level for 'everyday' resilience planning in order to advance a common understanding of current and future risk and identifying shared approaches for building resilience.

Experiences of implementing innovative nature-based solutions in urban areas of **Thailand** highlight the fact that infrastructure resilience should be approached differently due to following reasons. First, resilient infrastructure must perform beyond business as usual, and thus solutions should factor uncertainties and enable building capacity of people and built environments to continuously adapt. Nature-based approaches provide such solutions. Second, climate and disaster risk is context specific. Building resilience requires solutions that are appropriate for the wider social, cultural and political setup. Third, while planning is critical, increased emphasis is needed on implementation to demonstrate the benefits of nature-based solutions, including the multiple-benefits they can produce for local communities and economies. However, adopting such approaches requires overcoming challenges related to political economy, inadequate financing for nature-based solutions, and barriers to collaboration.

Lessons shared by **Tonga** on their 'journey' for making energy infrastructure resilient highlighted the importance of (i) adopting long-term planning to strengthen resilience; (ii) recognizing the full benefits of pursuing resilient infrastructure, including reduced losses from extreme events and improved operations and maintenance from day-to-day stresses; (iii) adopting new technology that enables transformational changes; (iv) promoting new skills, including skills among women technical experts; and (v) building systems for post-disaster response to facilitate swift recovery and reconstruction.

Key Takeaways

1. Strengthening the resilience of infrastructure is a **journey**, requiring a sustained commitment to enable transformational change through institutional strengthening, new technology and financial solutions.
2. **Solutions to build resilience cannot be based on a business as usual approach.** Resilient infrastructure needs to factor uncertainty, a long-term perspective, and multi-stakeholder views.
3. Understanding of **risk at a systems level** forms the bedrock for resilience decision-making. This includes understanding of current and future risks, and close monitoring of early signals of climate thresholds.
4. Identifying resilience measures requires **asking difficult questions**, including the appropriateness of infrastructure investments. Asking such questions upfront can help to avoid locking-in additional risk to existing at-risk infrastructure, i.e. promote the concept of 'build back differently' in a pre-event context.
5. **Scale up nature-based approaches** as solutions for building infrastructure resilience. This provides opportunities to tailor resilience solutions based on local context, provide multiple benefits (beyond resilience), and promotes collaborative working.
6. **Prioritize implementation** to demonstrate real benefits, foster innovative partnerships, and learn from mistakes.