Risk Assessment Frameworks for Resilient Infrastructure

3 December 2021, Friday
2–3 p.m. Manila Time (GMT+8)
Zoom

This online session explored the ADB publication on the "state of play" of disaster-resilient infrastructure in Asia and the Pacific. The event featured case studies of critical roads in Pakistan and projects in the Pacific region.

ADB's Climate Change and Disaster Risk Management Division is preparing a publication that identifies opportunities to support infrastructure resilience and explores the "state of play" of resilient infrastructure in Asia and the Pacific. The project aims to support ADB and its Developing Member Countries by identifying problems, best practices, knowledge gaps, challenges, and recommendations to achieve resilient infrastructure systems.

Therese Karger-Lerchl of Vivid Economics introduced the publication. Neeraj Baruah, also from Vivid, discussed the framework underpinning the publication and shared its application in the case of Pakistan's road sector. Juan Gonzalez of ADB presented examples of resilient infrastructure projects in the Pacific region.

> " It is important that we ensure that infrastructure is resilient and resists future disasters. Any investment we make today will affect how we live in the future. "
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> Engagement Manager, Vivid Economics

SPEAKER

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Technical Manager,
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PANELISTS

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Engagement Manager,
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JUAN GONZALEZ
Transport Specialist,
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MODERATOR

MARIO UNTERWAINIG
Disaster Risk Management Specialist
(Resilient Infrastructure),
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KEY MESSAGES

- Resilient infrastructure systems are crucial as the frequency and severity of disasters in Asia and the Pacific continue to increase due to climate change.

- The research proposes a risk assessment framework for infrastructure that is modular, scalable, and participatory. The methodology follows the steps of 1) risk narrative 2) risk assessment and 3) integration into decision making that addresses risk barriers such as asset-level risk assessment, complexity of risk modelling, and data interpretation for decision criteria.

- Risk assessment can be made more useful by using platforms that are easy to understand. Online and open-source platforms provide datasets for risk assessment from overlay of roads up to socio-economic data such as critical infrastructure, population, and GDP. This process challenges the idea that risk assessments are too complicated and not readily available to inform planning and development.

- Data challenges can be overcome through consistent sharing of risk information on open source platforms such as the Global Risk Data Platform.

- A Pakistan risk assessment case study shared during the event shared risk models for roads using a multi-hazard and system-wide assessment approach. Through identification of hazard footprints or areas likely to be affected by earthquakes, assessment of socioeconomic exposure, and prioritizing geographic hotspots of critical road infrastructure, data analysis can inform better investment prioritization. The process is scalable and is applicable for other countries.

- Risk can never be fully eliminated through infrastructure planning and design, as such it is important to indicate residual risks for transparency and accountability.

- Local stakeholder knowledge is important in all stages of risk assessment. People who have lived through experiences of disasters have first-hand knowledge and context of their area, which makes them experts as well. Local knowledge should always be considered when implementing projects.

- Infrastructure are long-term systems that provide critical services, therefore risk assessments should be embedded in project design. Risk assessments can improve project viability and help to ensure higher returns are generated.

FURTHER INFORMATION

ADB. 2020. Building Disaster-Resilient Infrastructure through Enhanced Knowledge. https://www.adb.org/projects/52251-001/main

Vivid Economics. https://www.vivideconomics.com/