



Turning Data into Action: How Risk Information Systems Improve Disaster Resilience and Investment Decisions

28 April 2026 • 2:00-3:30 a.m. Manila Time (GMT+8) • Virtual via MS Teams



The session highlighted the critical role of reliable risk information in strengthening resilient infrastructure and reducing disaster losses, with a focus on Risk Information Systems (RIS). The discussion showcased the ADB-supported development of Armenia's National Disaster Risk Information System, covering core concepts, key data sources, and practical applications in disaster risk management and infrastructure planning. The session also shared lessons from the 2024 Northern Armenia floods, and a major roads disaster risk assessment supporting the Transport Sector Adaptation Plan. Discussions also highlighted advances in geospatial analysis and AI, demonstrating evidence-based approaches to climate-resilient infrastructure planning.

Greater data leads to better decisions only when it is included, integrated into the systems designed to support real world choices.

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KEY MESSAGES

- Risk information systems create value only when they translate multi-source data into decision support for planning, preparedness, response, and recovery, not by storing data alone.
- Disaster risk management is fundamentally data-driven: hazards, exposure, and vulnerability must be integrated to identify hotspots and prioritize risk reduction and resilience investments across sectors.
- Risk information often fails to shape real investment choices because data are fragmented across agencies, standards are incompatible, outputs are not tailored to decision-maker needs, and ownership and long-term updating are weak.
- The 2024 Northern Armenia floods demonstrated how information gaps increase losses and slow response and recovery; improvements are needed in monitoring, actionable early warning communication, exposure/vulnerability data, and rapid integration of multiple information sources.
- A unified National Disaster Risk Information System (NDRIS) can address these gaps by providing one interoperable, web-based multi-hazard platform integrating hazard, exposure, vulnerability, analytics, dashboards, and reporting supporting investment prioritization, preparedness, emergency planning, and risk communication.
- Sustainable risk information systems require institutional coordination: clear roles, shared standards, regular update cycles, and partnerships across government, science institutions, and development partners.

Practical examples clearly demonstrated how integrated risk information can inform decisions, strengthen preparedness, and guide more resilient investment planning across sectors.

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FURTHER INFORMATION

- Avagyan, A., Manandyan, H., Arakelyan, A., Piloyan, A. (2018). Towards a disaster risk assessment and mapping in the virtual geographic environment of Armenia. *Natural Hazards*, 92(1), 283–309.
- [Armenia Floods May 2024 – Post-Disaster Needs Assessment](#). *Natural Hazards*, 92(1), 283–309.