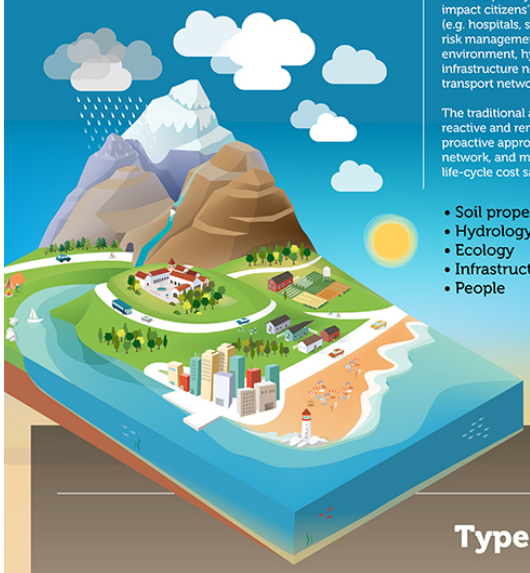
Geohazard Risk Management in Transport Sector

Geohazard Perspective
Transportation Asset Management

Multi-dimensional Approach to Geohazard Risk Management: Landscape Perspective



Geohazards are increasing across the globe due to climate change and increase the risk of long-term disruption to transport systems. A reliable and efficient transport system/network is a major catalyst for the development of a country and the backbone of its functioning. Disruption to the transport system will cause economic setbacks and impact citizens' security and access to critical infrastructure (e.g. hospitals, schools, shelters, etc.). Therefore, a geohazard risk management perspective that incorporates people, environment, hydrology, geology, and the transportation infrastructure needs to be adopted for robust and resilient transport network.

The traditional approach to maintaining transport network is reactive and remediates geohazard events as they occur. A proactive approach that evaluates hazards, monitors the network, and manages the infrastructure can result in 60-80% life-cycle cost savings

- Soil properties and geology
- Hydrology
- Ecology
- Infrastructure
- People

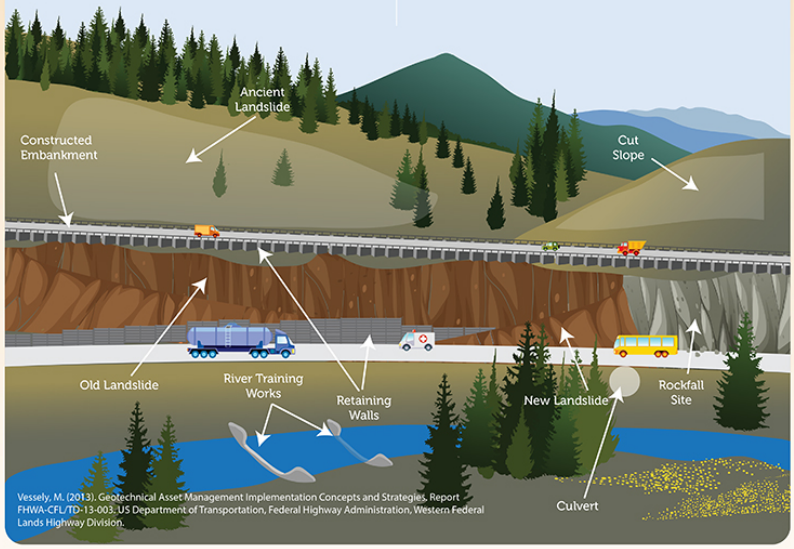
Types of Geohazards

Glacial Lake Outburst Floods | Avalanche | Volcano | Earthquakes, Liquefaction | Floods | Tsunami | Landslides, Rock Slides, Debris Flows | Mud Slide

Transport Asset Management

Geohazard risk assessment from a landscape perspective | Hazard Monitoring | Early warning systems

Structural measures | Emergency preparedness and response plan | Institutional coordination and management



Vessely, M. (2013). Geotechnical Asset Management Implementation Concepts and Strategies, Report FHWA-CFL/TD-13-003. US Department of Transportation, Federal Highway Administration, Western Federal Lands Highway Division.

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