World Bank Group Report Launch:
Financial Protection of Critical Infrastructure Services

IGNITE PRESENTATIONS
Pathway to Resilient Transport for Vietnam

Dr. Jen JungEun Oh
Infrastructure Sector Leader, World Bank

11 March, 2021
Data-Driven, Evidence-Based Decision-Making can Strengthen the Resilience of Critical Infrastructure

- 60% of the land area and 71% of the population are exposed to two or more multi-hazard events
- This could result in annual average asset losses amounting to 1.5% of GDP and loss in consumption amounting to 2% of GDP

Decision-Making under Uncertainty
System-of-systems methodology for geospatial analysis

- Risk exposure
- Criticality
- Investment costs
- Benefit-cost ratio
Evidence-Based Investment Planning and Multi-Modal Strategy can bring Significant Economic Benefits

- A 10% shift from roads to other modes shows: substantial decrease in expected economic losses by ~25%

  **Current modal share**

  **10% shift away from roads**

  **Provincial-level application to maximize the returns on investments under tight fiscal conditions**
Significant increase in upfront public investments are called for, through stronger institutional foundation and coordination.

**Key Findings**

- Transport network in Vietnam is under significant risk due to exposure to various natural hazards.
- Climate change increases likelihood of catastrophic events and expected economic loss, thus, making more investments economically justified.
- Beyond national corridors, secondary roads and rural roads are backbone of resilience, providing redundancy.

**The project informed:**

- Decision-makers of the importance and usefulness of criticality analysis in prioritizing adaptation measures.
- Government’s Socio-Economic Development Strategy and 5-year Implementation Plan.

**Next Steps**

- Institutional coordination on data standards and sharing needs to be strengthened, to improve quality and coverage of infrastructure location and quality data, hazard exposure data, socio-economic data.
- Coordination between infrastructure asset management and budget allocation functions.
- Engineering research on climate adaptation interventions to transport is a priority to enhance rural resilience.

The project informed:

- Decision-makers of the importance and usefulness of criticality analysis in prioritizing adaptation measures.
- Government’s Socio-Economic Development Strategy and 5-year Implementation Plan.