

Climate Resilience in the Transport Sector Challenges and opportunities for Small Island Developing States (SIDS)

Climate and weather projections



More intense

rainfall events



Stronger

tropical

storms





Higher Rising temperatures sea levels & drought

Risks to transport infrastructure assets

- Flooding, landslides and erosion cause wash-outs, destabilization and collapse of roads and bridges
- · Storm surges and flooding damage terminals, docks, cranes and other airport and seaport infrastructure
- Heat causes bridge joints to expand, deteriorates pavement and compromises airplane takeoffs (requiring redesign of runways)
- Rising sea levels threaten infrastructure, most of which is on the coast

Potential impacts

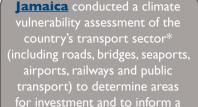
- Loss of trade and tourism revenue
- Food and energy shortages
- Disrupted travel and access to services like health care
- Relocation of communities
- Costly reconstruction, diverting funding from other needs

Across the globe, SIDS are taking action to build resilience to climate risks in the transport sector to protect key assets and minimize disruptions to trade, service delivery and key industries such as tourism. Investment in climate resilient infrastructure is imperative; \$15-30 billion per year is needed to climate proof transport infrastructure in developing countries.

SIDS in action: best practices for resilient transport infrastructure

Dominica consulted with coastal communities to identify infrastructure improvements to increase resilience* and made investments in drainage to divert floodwaters and capture debris to prevent damage to roads, bridges and other critical infrastructure.





revised national transport policy.

Small Island Developing States

58 nations home to

65 million people

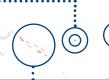
29% of the within **5m** above sea level

Kiribati used geocell pavement to repair unsealed feeder roads, improving the structural integrity of the road, reducing shipping and materials costs and enhancing the accessibility of outlying communities.



The **Maldives** has constructed extensive coastal protection measures (e.g., breakwaters, revetments) as well as invested in coral reef protection* to safeguard air and sea ports from sea level rise and storm surges.

Tuvalu improved the resilience of its airport infrastructure assets and operations by holistically addressing climate risks in its design specifications, drainage system design, emergency response systems and preventive maintenance system.



The **Solomon Islands** developed a guidance manual that provides ministries with the tools they need to reduce climate and weather risks across transport sector infrastructure planning, design and construction processes.

* USAID funded activity