Global Supply Chain Forum
Climate Change Adaptation, Resilience-Building and Disaster Risk Recovery for Ports
UNOPS contribution

The Need for Resilient and Climate-Adapted Infrastructure: Building a resilient, climate-adapted future for SIDS requires a multi-faceted approach to infrastructure development. This includes well-planned, funded, and constructed transport infrastructures, of which ports are a part of. Ports are the lifelines of the island nations, enabling trade, tourism, and economic activities. However, roads, bridges, and other transport links are equally vital as they connect inland areas to the ports, facilitating the movement of goods and people.

The challenges SIDS face are significant. Rising sea levels, increased frequency and intensity of storms, and other climate-related impacts threaten the very existence of these nations. Therefore, infrastructure must be designed and built with these risks in mind. From an UNOPS perspective, it is not enough to build resilient infrastructure; it is necessary to understand how these systems operate and interact with each other and think of infrastructure not only as the built environment, but as a system.

Governments, and particularly SIDS have to prepare for properly planned, funded, and constructed transport infrastructures while understanding how to maximize the efficiency of the supply chain end-to-end. A comprehensive approach involves integrating transport infrastructure with other critical sectors such as energy, water, and communications. This integration ensures that the entire system can function smoothly even in the face of disruptions.

Enhancing global supply chains through strategic sustainable procurement initiatives: A supply chain will only be as sustainable and resilient as the suppliers that make it. UNOPS ensures that the suppliers take sustainability at heart through DRiVE (Delivering Responsibility in Vendor Engagement program) integrating environmental, social and economic considerations into procurement projects through a comprehensive framework that ensures that our suppliers operate with the highest standards of integrity. DRiVE represents our deep commitment to enhancing global supply chains with a focus on sustainable development.

Strategic Infrastructure Planning: A key part of UNOPS mission is to assist governments in strategic infrastructure planning through comprehensive evaluations and actionable recommendations to tackle the dual challenges of funding and capacity shaping resilient, climate-adapted futures for nations:

- In Saint Lucia, UNOPS supported the Government in implementing its National Vision Plan by increasing the availability of national infrastructure data and enhancing technical capacity within the government through an extensive data collection on the status and performance of Saint Lucia's national infrastructure, storing this data in a government-managed database to enable evidence-based decisions on effective land use and resilient infrastructure development. We used demographic and economic scenarios to support strategic planning, assessing long-term infrastructure needs and evaluating potential investments and policies to meet those needs. Focus on key sectors such as wastewater, water, energy, and waste to address Saint Lucia's long-term sustainability challenges.
- In Curacao, UNOPS conducted thorough road infrastructure assessments and impact forecasting in Curaçao, which were crucial in guiding evidence-based decisions to enhance road safety and intra-island connectivity. Improvements in road infrastructure have significantly increased the accessibility of remote communities to larger cities, markets, and essential services effectively addressing the challenges posed by the island's small size.

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Digital Tools for Sustainability through Building Information Modelling: The digitalisation of construction processes is one of the most reliable tools to combat climate change because it enables more efficient and precise management of resources, reducing waste of materials and energy. This efficiency significantly lowers greenhouse gas emissions by facilitating the adoption of cleaner technologies. Additionally, it enhances the resilience of infrastructures against extreme weather events and optimizes continuous monitoring and predictive maintenance, extending the lifespan of constructions and minimizing the need for reconstruction, which also contributes to sustainability.

Recommendations for Sustainable and Resilient Networks

(a) **Shifting the Debate to Infrastructure as a System:** To achieve long-term resilience, we must shift the debate from viewing infrastructure projects in isolation to understanding infrastructure as an interconnected system. This holistic perspective allows for better planning, more efficient use of resources, and greater overall resilience. For example, a port is not just a standalone entity; it is part of a larger network that includes roads, railways, and logistics hubs. By considering these connections, we can design infrastructure that is more robust and capable of withstanding shocks. This system-wide approach is crucial for SIDS, where resources are often limited and the impact of disruptions can be severe.

(b) **Embracing a supply chain perspective is essential to enhancing performance with existing infrastructure:** Efficient management of customs clearances and port operations is vital for the seamless operation of supply chains. Delays at ports can have cascading effects throughout the entire supply chain, leading to increased costs and reduced competitiveness. By adopting modern technologies and best practices, we can streamline these processes, making ports more efficient and reducing turnaround times. This not only benefits the ports but also the broader economy, as goods can move more quickly and reliably.

To operationalize these recommendations is necessary:

- Capacity-building initiatives are essential, such as training local engineers, planners, and policymakers to ensure that they have the skills and knowledge to design and manage resilient infrastructure.
- Investing in advanced technologies, such as predictive analytics and real-time monitoring systems, can help identify potential issues before they become critical.
- Fostering regional and international partnerships can provide additional resources and expertise. Collaboration with other nations, international organizations, and the private sector can lead to innovative solutions and shared best practices.

A Moral Imperative: Building sustainable and resilient transportation networks is essential for the long-term prosperity and climate adaptation of SIDS. These networks are the backbone of economic development, enabling trade, tourism, and connectivity. UNOPS is dedicated to supporting these efforts through our expertise in infrastructure and sustainable development. We are committed to working with governments, local communities, suppliers and international partners to create a resilient future. Together, we can create a future where our transport networks are robust, efficient, and resilient to climate challenges. This is not just a technical challenge but a moral imperative. The livelihoods and well-being of millions of people depend on our ability to act decisively and collaboratively.