

Organization: Stockholm Environment Institute (SEI)

Name: Karina Barquet

Title: Senior Researcher and Team Lead Water, Coasts & Ocean

Esteemed delegates and participants,

As we gather to discuss the future of SIDS, it is imperative that we acknowledge the urgent need for a transformative approach to critical infrastructures.

In September 2017, Hurricane Irma bashed her way through the Caribbean, causing catastrophic damage with many islands experiencing prolonged power outages and severe disruptions to water supply. The impact on electricity and water systems underscored the vulnerability of our critical infrastructures and highlighted the need for more resilient solutions.

The traditional single-use infrastructure approach has never been entirely suitable for SIDS and as the climate changes, big centralized systems cannot address the multifaceted challenges we face today. Instead, we must adopt a new diversified and multifunctional infrastructure paradigm that ensures a sustainable blue economy, enhances our resilience to climate risks, and better conforms to SIDS' size, geographical remoteness, and dispersed populations.

Multifunctionality means ensuring structures can be used by various sectors to generate multiple benefits. It requires diversifying infrastructures, so they are better-fit-for-purpose, for example by using the principles of mobility – to easily move the service where there is a need, and the principle of modularity – in order to avoid long and costly megaprojects that by the time they are built they are no longer sufficient.

This multifunctional infrastructure paradigm needs to be integrated into coastal and marine spatial plans to balance conflicting interests from economic sectors and help generate benefits from multiple uses within the same space, optimize resource utilization, and reduce environmental impacts. At the same time, multifunctionality can help maximize the resilience of critical infrastructures, reduce capital expenditures, and distribute operational expenditures more effectively through the sharing of services, costs, and data.

In conclusion, the adoption of a multifunctional infrastructure paradigm is not merely an option but a necessity for SIDS. I urge states and international organizations to embrace this approach, as it aligns with our commitment to the Sustainable Development Goals and the Paris Agreement. By doing so, we can ensure that our coastal and marine areas thrive in the face of climate adversity and manage the challenges from fast-growing marine industries. Let us seize this opportunity to pioneer innovative and resilient infrastructure solutions, setting a model for sustainable development worldwide.