

## **Coastal Climate Change Adaptation (CCA), A SIDS Education Imperative**

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While the social and economic status and quality of life of island residents is influenced by the coastal zone, a significant percentage of island populations remain unaware of the impact of their own decisions and actions on this dynamic but vulnerable area. Indeed, many recognize the significant negative changes to the coast during their generation, yet remain unaware that while those changes are driven by both climate and human factors. This presentation demonstrates the process of development of a coastal CCA education module that presents phases of the new coastal climate change paradigm and the possible adaptation measures that may be utilized within SIDS. The first phase incorporates the concept of coastal planning and development control that prevents the inappropriate siting of coastal infrastructure, with two positive results: (1) adequate setbacks and control of discharges removes the human stressors from an already weakened coastal system; and (2) the setbacks also reduce the vulnerability of the same infrastructure and inhabitants to increasing intensity of sea level-related hazards. A concurrent phase ensures the protection of the five natural lines of defense against coastal hazards – barrier reefs, fringing reefs, seagrass beds and coral rubble, beaches and dunes, and mangrove wetlands. The final phase recognizes that the accelerated coastal climate change may challenge the ability of SIDS to “keep up” by conservation and coastal planning alone. Or, in some cases, there may be a catastrophic failure of planning policies and conservation efforts. These situations call for artificial shoreline stabilization measures by SIDS that are costly, and if not well-designed, could exacerbate coastal risks.