Barbados

Coastal Infrastructure Program

PROGRAM
The Coastal Infrastructure Program (CIP) aims to ensure continued economic growth through improved management and conservation of coast.

Shoreline Stabilization
Providing coastal infrastructure to enhance amenity value of beaches for local and tourist use in three beaches on South-West Coast, including Rockley Beach as the largest investment.

WHY ARE WE DOING THIS EVALUATION?
Do investments in shoreline stabilization and beach amenity enhancement have beneficial effects on medium-term economic growth?

RESULTS
Compared to its synthetic control, we found that Rockley Beach has perceived positive impacts in ...

Night Light Activity
Positive impact on local night time activity of approximately 22.1% in two of three years post-treatment.

Economic Growth
Impact in luminosity translates into an average increase of 11.7% in local GDP.

CONCLUSIONS
The findings provide strong evidence for the development effectiveness of shoreline stabilization in an effort not only to reverse coastal erosion, but also to promote sustainable economic growth. The technological advances that have made remote measurement of night light activity possible not only help illuminate development effectiveness; they also support efforts to continuously improve results-based policy design.

Database
Rich time series data from administrative sources and nighttime satellite imagery to capture economic growth.

Panel consisting of 15 years (1992-2006) for 19 beaches.

Type of Evaluation
Synthetic control method: constructing a synthetic control group from 18 non-affected beaches along the coast.

Economic Growth
1. Increased income from more tourism activity on/near beach.
2. Increased real estate activity near beach from rising property values.

Innovative Evaluation
First rigorous evaluation of a shoreline stabilization program using innovative data and analytical tools.

EXPECTED IMPACTS
Shoreline Stabilization
Providing coastal infrastructure to enhance amenity value of beaches for local and tourist use in three beaches on South-West Coast, including Rockley Beach as the largest investment.

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