

Modular Gabion Systems

Process

Location:

Anegada Reef Hotel, Anegada, BVI

Specifier:

Property Owner

Contractor:

Property Owner

Project Date:

1996

In 1995, the island of Anegada was savaged by two major hurricanes, Luis and Marilyn. When the storms had passed, little was left of the beachfront at the Anegada Reef Hotel; storm surge had washed away nearly 60 feet of beach. (Note the proximity of the shoreline to the trees in the early photos.)

After weighing various options for shoreline protection and restoration, the property owners elected to build a porous and flexible Modular Gabion Systems breakwater at the approximate location of the pre-erosion shoreline. The decision to use gabions reflects the owners' need for proven erosion control, respect for the natural environment and cost effectiveness.

In the years since construction, the entire area between the eroded shore and the breakwater has returned to beach. The breakwater deflects wave energy causing entrained sand to drop from suspension and collect behind the structure. The gabions, now barely visible, continue to protect the island.



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2221 Canada Dry Street, Houston, Texas 77023 USA

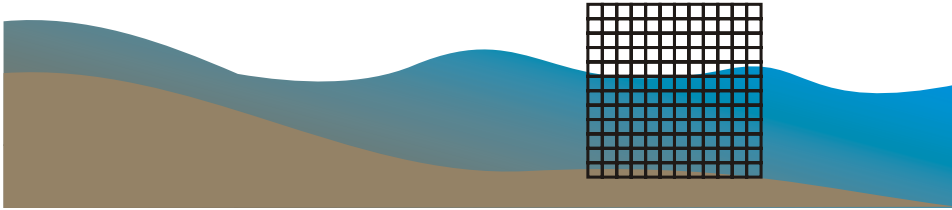
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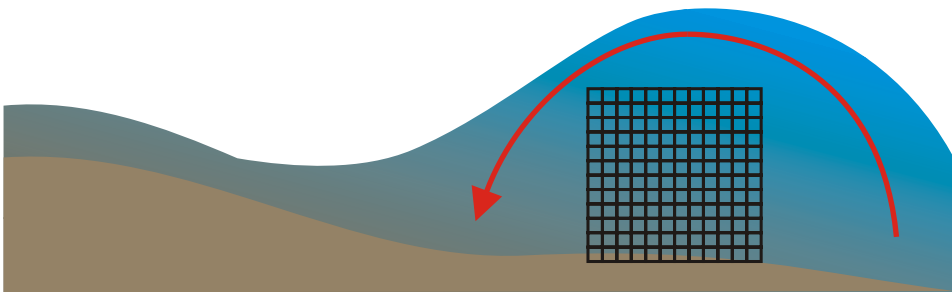
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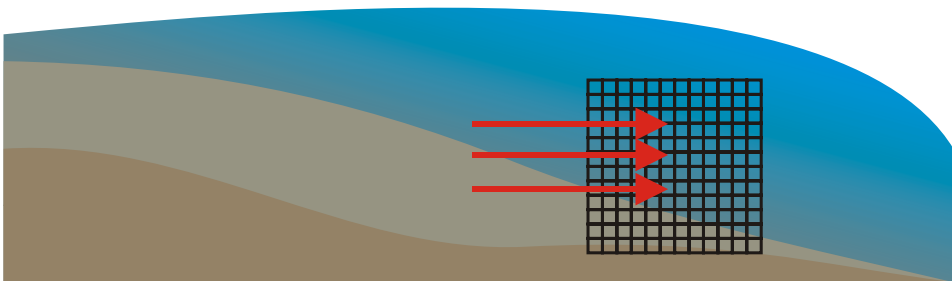
Step 1:

Gabion breakwater is erected at approximate pre-erosion shoreline.



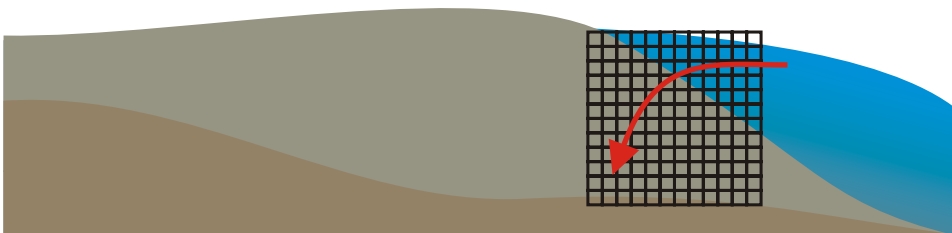
Step 2:

Wave action carries entrained sand over gabion breakwater.



Step 3:

As water recedes slowly through the breakwater, sand falls from suspension and is trapped, building beach.



Step 4:

Normal wave action energy is absorbed by gabion face to slow reflected wave causing continued deposition of entrained sand in front of the gabion.



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