

Your undersea Architects

Client

Gran Dominicus Resort, Dominican Republic 1998

Breakwater Objective

Restore and maintain the necessary sand and beach width desired by tourists and to provide a reef for snorkelers and divers to enjoy.

Breakwater Design

The submerged breakwater was constructed 30 m offshore using 450 Reef Ball units with heights of 1.2m and 1.3m and weights of 1600kg to 2000kg. The breakwater consisted of three segments, each with three rows of Reef Balls deployed in depths from 1.6m to 2m.

Outcomes

Sand accretion in the lee of the breakwater ranged from 26 to 44 m³/m from 1998 to 2001 with a 13m gain in shoreline.

There were no adverse effects on adjacent beaches and in 1998 the breakwater received a direct hit from Hurricane Georges (Cat 3) and large waves from Hurricane Mitch (Cat 5) and no Reef Ball units were moved or damaged.



Gran Dominicus Resort, Dominican Republic. Before and after construction of Reef Ball Breakwater, 1998 and 2001. Photo: Lee Harris