

COASTAL EROSION ON NEVIS

by Shauna McGarvey

Walking along the beach after a hurricane can be a sobering experience. The amount of erosion is often dramatic and it may take months for the beaches to return to normal. According to Dr. Gillian Cambers of the University of Puerto Rico, most beaches will recover about 80% of their pre-hurricane size within six months - the remaining 20% is usually lost to the ocean. Dr. Cambers who works for the United Nations Educational, Scientific and Cultural Organization (UNESCO) coordinating the Coast and Beach Stability in the Caribbean (COSALC) project, has been monitoring beaches throughout the Caribbean since the mid-1980s. Of the 13 participating territories, Nevis is the only island for which there is 12 years of uninterrupted data, thanks in part to the Nevis Historical and Conservation Society (NHCS), who with the cooperation of the Fisheries Unit, implemented the programme on Nevis and the dedicated volunteers have donated their time recording the measurements and an important picture is beginning to emerge. The data show that a significant proportion of Nevis's beaches are eroding. For example, Pinney's Beach has lost more than 25

square meters in the last 12 years. Overall, of the 18 coastal sites measured, 15 show significant erosion. The reasons for coastal erosion are not always clear, but we do know that hurricanes are a major culprit. Measurements taken two weeks after Hurricane Jose indicate that Pinney's Beach narrowed by 11 meters. Gallows Bay South narrowed by 5 meters and Lovers Beach lost more than 7 meters. While there is little we can do to ameliorate the devastation of hurricanes, we can prevent the other major culprit of beach erosion: sandmining. Mining sand away from coastal areas is a major step in amending this situation.

The news isn't all bad; however, several beaches are accreting or getting larger. Mariners

Beach at Cades Bay has gained over 40 square meters in the last 12 years and Mosquito Bay and Longhaul Bay also show general accretion trends.

Dr. Cambers was recently in Nevis to implement a Beach Profile Analysis computer programme at the NHCS

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Measuring the effects of Hurricane Jose. From Left: Daniel Arthurton, Dr. Gillian Cambers, Shauna McGarvey, Barbara and Geoff Gosling, Corrina Mak and Vincent Floquet.

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that will facilitate the collection and immediate analysis of the coastal data here on Nevis. Information obtained from this programme is used to establish safe "set back" distances for coastal development and to provide a further foundation for individual beach management questions and solutions.