assuming that the wave climate remains the same, the sediment particle would tend to move landward rather than seaward as required by the Bruun Rule. Fig. 7.7 illustrates this mechanism of sedimentary equilibrium.

With greater and greater sea level rise, the general situation will shift toward erosion. Of primary importance is that to predict the response to sea level change, each shoreline segment must be considered on a case-by-case basis with due consideration of the sediment budget. The components of the sediment budget are difficult to quantify. The best basis for developing an appropriate response model for a shoreline segment is an analysis of past response, including a focus on possible anthropogenic effects.

In discussing shoreline response models to sea level change and their development and calibration, it is important to recognize and respect the amount of "noise" in the system including that introduced anthropogenically. Coastal structures and sand management practices at navigational channel entrances are undoubtedly the main contributors to shoreline perturbation by humans. The special attention to documentation following storm activity should also be noted. Along the east coast of Florida, in excess of 38 million cubic meters of beach compatible material has been dredged from channel entrances and disposed at sea. Based on the Bruun Rule, this amount is enough to offset 70 years of shoreline retreat using a eustatic sea level rise of 1.2 mm/year and a retreat/rise multiplier of 100. Data provided by the Jacksonville District of the U.S. Army Corps of Engineers for the period 1980 to 1985 indicates that approximately 50% of the east Florida coast material dredged was still being disposed at sea during this period. This amount (38,000 m^3), again using the Bruun Rule, is sufficient to more than offset their retreat due to the eustatic sea level rise rate employed in the preceding example.

The role of inlets in Florida has been well documented in two cases. The entrance to St. Andrews Bay was cut in 1934 on a previously stable beach. Over the next 50 years, the beach receded at a maximum rate in excess of 2 m/yr where accretion of 1 m/yr had occurred prior to cutting the inlet, Fig. 7.8. The second example illustrates both the adverse effect of cutting the entrance to Port Canaveral in 1951 and the beneficial effects of a beach restoration project carried out in 1974. Again as shown in Fig. 7.9, a