

Beach Nourishment and Sand Formation on Naturally and Artificially Constructed Beaches

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Abstract

Beaches are constantly eroding and there are many different ways that people use to manage beach erosion. This can be done by constructing jetties, groins, sea walls, and other objects from the coast into the sea. The problem with these methods of managing beach erosion is that they all cause unintentional erosion and are very expensive. Another way people deal with beach erosion is by participating in beach nourishment. This is where sand is artificially pumped on to an eroding beach to create a new beach or widen the existing beach. Beach nourishment does not actually stop erosion, instead just gives the beach more sand to erode. This is the most popular method of dealing with beach erosion because it does not require constructing anything along the beach and does not cause unintentional erosion. It is also very expensive and can be very harmful to the wildlife that lives along the beach. Also, pumped sand erodes much quicker than natural sand. This means that the process of beach nourishment will have to be repeated multiple times and relatively frequently. The best way to handle beach erosion is to not do anything at all and let the beach naturally deal with erosion. Beaches naturally change their shape and position allowing them to survive thousands of years of erosion. People should think of all buildings near the coastline as temporary and should adapt to the changing coast. If we gave the beach its necessary space to survive, erosion would not be a problem and we would be able to enjoy beaches at a lower cost.