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# Coastal erosion cause for concern

COASTAL erosion along several areas of Selangor's 291km coastline is a cause for concern for the local authorities.

Winds and waves, which are the major forces in changing the state's coastline, have led to the shorelines being eaten up and labelled as "critical stretches".

Selangor Water Management Authority (LUAS) acting director Nor Zamri Sondor said the changing coastline, which is caused by wind and waves, washes off one area and builds up in another.

"Winds and movement of the waves causes non-stop sand movement and hard structures like sea walls and even large stones are placed to curb shoreline erosion.

"Most of the time, we suggest natural approaches such as replanting mangrove saplings. As the waves roll up to the shore, they pick up sand from the ocean floor and when the waves hit the shore, they deposit the sand.

"Over and over sand is moved but with mangrove trees, it helps to a certain extent to hold the sand and curb the impact of erosion," he said.

Five districts in Selangor with a coastline are Sabak Bernam (60km), Kuala Selangor (60km), Klang (76km), Kuala Langat (80km) and Sepang (15km).

LUAS coastal management engineer Norfaezah Shamsuddin said sand that rolls up in the waves washes up in a gradual pattern from one area and accumulates further down the coast.

"Several stretches along Selangor's coast in critical condition are Pantai Bagan Nakhoda Omar in Sabak Bernam, Pantai Bagan Lalang in Sepang, Batu Laut in Kuala Langat and Pantai Remis in Kuala Selangor.

"Various anti-erosion methods have been adopted. The Drainage and Irrigation Department is working with local authorities dredging sand for use in coastal reclamation to create a beach," she said.

Agriculture, aquaculture and industries in the coastal mangrove areas have also contributed to the increase in waves crashing onto man-made bunds, at times breach-

## Selangor authorities spending millions on rehabilitation work but more funds needed to prevent the problem



Nor Zamri (left) explains how the winds and waves result in a changing coastline while LUAS coastal management engineer Norfaezah Shamsuddin looks on during a site visit.

ing them. Newer bunds are then built landward.

Kuala Selangor District Council (MDKS) president Noraini Roslan said construction of buildings too close to the coastline could not be allowed as it would contribute to the erosion.

"Hard structures, depending on their size and activities, affect the coastal area differently.

"MDKS does get proposals to build budget hotels and seafood restaurants along the coast but our concern is the soft-sediment coasts which are most vulnerable to erosion," she said.

Noraini added that the council

had been rehabilitating Pantai Remis in the Sungai Sembilang area by planting mangrove saplings, placing rocks along the beaches and improving drainage.

"Pantai Remis is a hotspot for tourists and we began rehabilitation works in 2014. It will be completed in 2018 under three phases.

"The first phase was from 2013 to 2014 involving the construction of stalls to rehouse traders away from the eroding coastline.

"We also built two volleyball courts to encourage beach sports," she said.

In the second phase from 2015 to

2016, a 500m sea wall was built to stop further erosion on Pantai Remis.

Noraini added that the council had deliberated extensively on how best to protect the coastline and had chosen the use of sea walls, mangrove planting as well as enrichment with sand and rocks.

"MDKS has allocated RM1.5mil while the district Drainage and Irrigation Department received a RM6mil allocation to fill the eroded coastline.

"For more effective measures to protect the coastline, we will need an additional budget of RM3mil to RM5mil," she said.