

Are breakwaters the answer to coastal erosion?

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A major argument in favour of breakwaters is that it prevents coastal erosion, but, coastal civil engineer and environmental research consultant Xenia Loizidou, is not convinced.

“To try and solve the problem of erosion with breakwaters is like trying to cure a headache by heart surgery,” she told the Sunday Mail.

“In Paphos, they have tried to make the beach safer so people don’t drown but this needs a dam, a complete closure and breakers are not the solution here. On the contrary, they make it more dangerous because when the sea is rough secondary waves are created.”

According to Loizidou, each beach has its own problem and needs a different approach. In most cases breakwaters are not a solution and often create more headaches such as deteriorating water quality because they change the currents which naturally clean the areas near the beaches and create stagnant areas where the water is not circulating well.

Loizidou is convinced that this is the problem with Limassol, where pollution has been building up since the marina was built.

“The pollution there is not from the big ships as people say; they face big penalties, it’s from the long stretch they have built in the sea,” she said.

Apart from the huge amounts of rock which need to be quarried, Loizidou said experts need to ask what the causes of problems such as coastal erosion are.

“One is that rivers are dammed and the flow of sediment they bring to the sea stops. This sediment is still needed for the balance of incoming of outgoing sand and is now missing,” she explained.

There has also been the quarrying of gravel from the coast and the building of vertical walls next to the sea by hotels and for pedestrian paths, which, as she says “act like a mirror reflecting the sea”.

If there is a vertical wall it acts like a reflecting surface. Instead of the waves depositing the sediments on the beach the waves hit the wall and the sediment they contain is thrown back into the sea with double the force.

Indeed, she added, when a coastal wall in Paphos was demolished following her advice a sandy beach was ‘created’ within 30 days.

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