3D printed seawalls promote biodiversity and reduce pollution

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Spotted: Specially designed 3D printed cement tiles are being used to restore marine biodiversity in Australia. The tiles are irregularly shaped to mimic the root structure of mangrove trees. Mangrove trees are a favourite habitat for sea life but are disappearing at an alarming rate. Oysters, molluscs and other marine life use the artificial crevices in the gaps between the tiles to create new habitats, according to Reef Design Lab, which made the habitat. The tiles are marine-grade concrete reinforced with recycled plastic fibres.

The designs were developed by Sydney Institute of Marine Science, with support from Volvo. The company was inspired to work on the project after research showed one rubbish truck of plastic enters the world's oceans every minute.

Fifty tiles have been installed along a seawall in Sydney Harbor, Australia. Called the "Living Sea Wall", the tiles will be in place for 20 years, according to the Sydney Institute of Marine Science. Scientists plan to study how wildlife responds.

Takeaway: Thirty-five percent of the world's mangrove trees have been destroyed. In some countries

that figure is as high as 50 percent. This threatens marine life, which is also undermined by a dramatic increase in manmade seawalls along shorelines. These tend to be flat and inhospitable to marine life. More than half of Sydney's shoreline, for example is made of artificial seawalls. As a result, eco-systems collapse, which increases pollution. Some marine life filter out pollutants. It is hoped that the project will inspire future innovation to support marine eco-systems. Springwise has recently spotted similar attempts such as plans to more efficiently grow coral reefs on land.

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