

FEATURES

A group from the US plans to revive Thailand's damaged coastal reefs by planting artificial 'reef balls' on the sea floor

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KOH RAJA

Copycat coral

Concrete 'reef balls' — designed to make artificial coral reefs — lie on the sand on Koh Raja, off the southern tip of Phuket, awaiting deployment in the bay. Thailand lures millions of tourists annually with its coral treasures, and it is aiming to preserve the natural reefs that have come under threat by record numbers of visitors and that were damaged in the recent tsunami by planting artificial reefs along the Andaman coast.



Every day for weeks, John Walch from the US has been making quirky cement balls he is convinced will sprout life once when they are dumped into Thailand's coastal waters this month.

The project is not pollution, it's a form of environmental protection, rehabilitation and, ultimately preservation of part of Thailand's spectacular natural heritage that was damaged by the December 26 tsunami.

Thailand's lush marine paradise lures millions of tourists to the country with its gorgeous coral treasures, but the aim is to improve on nature by planting artificial reefs along the Andaman coast.

The Kingdom's coral has earned global renown, but as tourism has boomed in recent years, the natural reefs are under threat as many visitors take advantage of Thailand's low-cost and easily accessible world-class dive sites.

"There is too much diving. The number of people visiting each particular dive site has exceeded the limit," conservationist Phitul Panchaiyaphum of the Department of Marine and Coastal Resources explained on a boat to Koh Raja, off the southern tip of Phuket.

In addition to pollution such as plastic bags, fishing lines and nets, reefs have suffered from dive boats dropping anchor directly onto sensitive coral areas, he said. Divers themselves sometimes touch, break off or step on the reefs.

"We need to create more diving destinations," he told reporters. "We are installing artificial reefs — concrete cubes or balls where fish will live and where coral can grow."

Enter Walch and his non-profit Reef Ball Foundation. The group has already put half a million of the cement structures into the sea in 50 countries.

At the request of a resort hotel under construction

on Raja island, the Foundation began preparations for work in Thailand in September. Three months later the tsunami disaster struck.

A January assessment of the region's coral found 13 percent of reefs showed "high impact" from the waves — either broken or upturned coral, reefs smothered by sand, or damaged by debris swept into the sea.

"We're all here to help this bay recover from the tsunami," Walch, 56, said alongside a cement mixer set up at the site of the future hotel dominating Raja's beach.

Over the next month Walch and his team of international volunteers plan to place 300 reef balls in the bay, creating five new reefs and one snorkel trail to sit alongside the bay's single natural reef.

"It will provide new reefs for the increased number of tourists coming into this bay," he said, nodding at the handful of visitors snorkelling out in the bay's turquoise waters.

"You only have so many natural reefs to go to. This will help lessen the pressure by giving alternatives."

Similar artificial reefs are planned for Kata, Patong and Kamala bays on Phuket, and on Koh Phi Phi, famed for its coral formations.

The projects have the backing of the prime minister's office, the Tourism Authority of Thailand and the Ministry of Environment, all of which are eager to find ways to ease mounting pressure on the Kingdom's ecosystem.

Though they look crude to the eye, the metre-wide reef balls, patented by the Foundation, are

actually quite complex. They are designed so that as water passes through their many holes, a vortex is created that pushes the ball down, ensuring its stability.

Four reef balls had already been set in place in the bay as a demonstration before the tsunami. All of them stayed put.

The balls, Walch said, quickly become hosts to flourishing coral systems, with fish claiming them as homes barely 15 minutes after placement on the sea floor.

"Within three years, reef balls have 75 percent of the marine organisms that inhabit a normal reef," he said. Pieces of coral broken off by the tsunami that would die if left unattended are attached to the balls where they grow anew.

Not everyone is a reef ball fan, though, with

some wondering if overextension of the projects will backfire with tourists who come to Thailand for the genuine article.

"This is a way to decrease pressure on coral reefs ... but I don't see the point of reef balls in the natural reef," said Nipon Phongsuwan, a senior biologist at the Department of Marine and Coastal Resources, who put the number of divers and snorkellers visiting Phuket at about 100,000 per year.

"For the first 10 years they might look ugly."

Walch, who has worked on artificial reefs for three decades, said they'll look splendid after only a few years, but conceded the true treasures of the sea belonged to nature. "We can never replace what mother nature has done," he said, "but we can try and replicate it as well as we can." AFP