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Underwater Housing

The concrete reef balls project launched about a year ago around the Talang-Talang islands off the southern tip of Sarawak has begun to show signs of success, reports DIANA ROSE

DATUK Dr James Jemut Masing is all smiles as he hoists himself into the *Challenger*, the Fisheries Department's boat buoyed off Pulau Talang-Talang Kecil, Sarawak.

"Our concrete reef balls are doing fine," says the Sarawak Minister of Tourism as he removed his diving gear. Masing and 10 other divers from the Sarawak Scuba Development Committee (SSDC) were inspecting artificial reef balls placed 13m underwater some three nautical miles off the Talang-Talang islands.

Exhilarated from his 40-minute dive in the waters at Batu Penyu, the 51-year-old Masing - who had announced he was taking diving lessons at the project's launch last year - waxed eloquent over the marine life he'd seen.

"I saw baby turtles, stingray, sea urchin, and lots of soft and hard corals growing. This is a good sign that we have achieved our objective."

The artificial reef balls were deployed last June as part of the state government's effort to restore the marine ecosystem of the Talang-Talang region at the southern tip of Sarawak.

By providing a substrate for corals to take root,, explains Masing, the concrete balls can help restore reefs that are the basis of a healthy, diverse marine ecosystem.

Coral reefs are a rare feature in Sarawak due to its shallow sea shelf. The state's reefs are limited to the areas off the shores of Bintulu, Miri and offshore islands including the Talang-Satang region.

Apart from providing a home for marine life, the reef balls also deter illegal trawlers who had been fishing in the area. The balls will rip trawler nets, says park ranger Christopher Kri, Masing's scuba diving partner.

The area in which the reef balls have been deployed is essentially a cluster of islands, including Talang-Talang Besar, Talang-Talang Kecil and Satang Besar, also known as Turtle Island.

About 95% of turtle landings in Sarawak occur on the beaches of these islands and along Tanjung Datu beaches, off the coastal town of Sematan, 100km south of Kuching. (Another turtle landing site is the Similajau National park in Bintulu).

The deployment of these reef balls is part of a three-year Turtle Research and Development project, which received RM1.4 mil from the Federal Government and RM1.6mil from the

state.

The project, the first of its kind in this region, is funded by the Ministry of Science, Technology and Environment in collaboration with the Sarawak state government and an American volunteer group called The Reef Ball Development Group Ltd.

The American group has 30 such projects worldwide. The group says concrete reef ball technology is among the most advanced artificial reef systems that can be used to restore the world's oceans.

For decades, people have dumped tyres, cement blocks, drums, old refrigerators and cars into the sea to build artificial reefs. But all these items would, in the long run, have an impact on the sea environment as they are not chemically inert.

The concrete reef balls, shaped like halved balls and dotted with holes that give them the appearance of gigantic Swiss cheese, are deemed environmentally friendlier. The balls were made in Kuching and modelled on the type used by the American group else-where. They come in three sizes, and cost between RM200 to RM350.

According to Masing, similar models were used in the United States where they have proven to be better than other artificial reefs as they contain no toxins or biologically active compounds.

"They are also stable, and can last up to 500 years and have a special concrete mixture which has the same PH as salt water."

Early this month, another 260 reef balls have been deployed in the areas surrounding the Talang-Talang region. Ultimately, the project will deploy 5,000 reef balls within the vicinity of the Turtle Islands.

Creating reefs is crucial for the conservation of marine life in the area, says marine biologist James and Bali, who is currently working on turtle conservation on the islands.

He says the reef balls will provide a resting and feeding spot for thousands of baby turtles released from hatcheries sited on the islands.

Four of the world's seven turtle species are found in Malaysia, namely the leatherback, green, hawksbill and olive Ridley.

These long-lived ancient creatures - they've been around since before the dinosaurs! - have been under threat from human activities and are now one of the most endangered species in the world, says Bali.

Countless turtles are killed when they get caught in trawl nets every year; with the reef balls designed to keep trawlers away, the turtles will have more of chance of surviving.

Park ranger Kri adds that turtles are also threatened by sport fishing, consumption of turtle eggs, and garbage. "That is one of the reason why we do not want to tell you the exact locations of the artificial reef balls," he adds.

Dumping of rubbish, especially by irresponsible riverine settlers, is a major worry. Plastic containers and bags which are carried by river currents into the ocean, are the "silent killers" of turtles. Turtles feed on jellyfish so they often mistake plastic bags for food; once they ingest the bags, they die of indigestion and hunger.

"It is a slow and painful death," says Kri.

To further protect the marine habitat, the formation of the Talang-Satang National park is now in its final stages.

"We have sanctuary for animals but we have yet to have sanctuary for fish and other marine life," Masing says.

He adds that creation of the marine sanctuary is Sarawak's first step towards marine conservation.

He says Batu Penyu, within the proposed park, will be set up as a dive site for tourists. Designating an official dive site that can be monitored will reduce illegal scuba diving activities that have been damaging the natural reefs.

Admits Masing, "A lot more has to be done. But at least we have taken the first step towards conservation."

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