

## Coral rehabilitation shows little progress

Seven years since the 2005 launch of an environmental rehabilitation program, marine researchers have seen an improvement in the condition of coral reefs once damaged by human activities and natural disasters. The conclusion has been drawn in a report published by the Indonesian Institute of Science (LIPI) as part of its evaluation of the Coral Reef Rehabilitation and Management Program (COREMAP) II.

“We’ve seen an increase of the living corals in several areas examined during this second [COREMAP] program,” Giyanto from the LIPI’s Research Center for Oceanography told a press conference in Jakarta on Thursday. Giyanto admitted that the improvement was very small — with only around 5.58 percent of the total coral reefs examined by the LIPI’s Research Center for Oceanography, in 1,076 observation stations in 2011, found to be in a very good condition.

Zainal Arifin, the research center’s chairman, said coral reefs in many areas have been damaged by the use of explosives during fishing. “Coral habitats continue to decline year on year, which is partly down to destructive fishing. It is very alarming,” he said. Ecologically, a coral reef is an ecosystem that helps to prevent sediment from destroying the shoreline. It is also rich with biodiversity. Economically, the ecosystem can be the source of livelihood for coastal communities that use it either as fishing ground or for marine tourism.

Starting in 1998, COREMAP set out to establish viable, operational and institutionalized coral reef management in the country. In its second phase project that took place in 2005-2011, COREMAP in collaboration with the Asian Development Bank (ADB) and the World Bank delivered support on the rehabilitation and protection of coral reefs in 234 observation stations in 14 regencies and one municipality in the eastern and western part of the country.

Starting in 2006, the World Bank supported the program, which took place in the eastern areas of the country — in the regions of Biak, Buton, Pangkep, Selayar, Sikka, Raja Ampat and Wakatobi, which are located in five eastern provinces: East Nusa Tenggara, South Sulawesi, Southeast Sulawesi, Papua and West Papua.

Citing the report, Giyanto said that live coral cover in five out of the total seven regencies showed a trend of increase. Only coral reefs in Biak regency were found to be in bad a condition.

“It [Biak] used to have excellent live corals — one of the precious species is table coral or *Acropora tabulate*. However, the live coral cover in the regency has declined significantly particularly as a result of a massive hurricane in 2009,” said Giyanto. In research conducted shortly after the hurricane, he said, scientists found the coral already upside down and dead. Climate-related white band disease affecting coral in the area also aggravated the problem.

In addition, to the eastern areas species of coral in the western areas have been hit hard by natural disasters. “In 2004, we conducted research that aimed to collect baseline data on coral reefs in Nias regency. At the time, the condition of live coral in the area was quite good,” said Giyanto.

However, after a massive tsunami that affected Nias in 2005, coral reefs in the area suffered a huge loss. “Even if coral areas increase, the condition is still not the same as before,” he said. The ADB supported projects from 2004 to 2011 in one municipality and seven regencies in the western part of the country, including Batam, Bintan, Lingga, Natuna, Mentawai, South Nias and Central Tapanuli.

Nurul Dewani of the CRITC COREMAP II said that to accelerate conservation for targeted at-risk corals, the third phase of the program would be integrated with the Coral Triangle Initiative (CTI).