Great Barrier Reef reserves protected fish from cyclone

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The news comes from Australia's Great Barrier Reef. Michael Emslie from the Australian Institute of Marine Science and colleagues analysed data from underwater surveys done there between 1983 and 2012.

They found that when protected areas were expanded to cover 40 per cent of the Great Barrier Reef Marine Park, the biomass of coral trout, an important fishery species, doubled inside many of the areas.

"It's heartening to know the green zones are working as we had expected," says Emslie.

When a large tropical cyclone swept through the area in 2009, the biomass of coral trout declined outside, but not inside, the reserves. Emslie says that since the fish tended to grow bigger inside the reserves, they were able to spawn more larvae, which allowed a faster recovery.

Severe tropical cyclones are likely to become more frequent as a result of climate change, says Elizabeth Madin from Macquarie University in Sydney, Australia. "One of the unique things that this study does is illustrate the point that we can help curb the negative effects of climate change by enacting local solutions," she says.

Given the effect the reserves had on the Great Barrier Reef, such measures would be likely to have an even greater impact in areas of more intense fishing, such as around large coastal

populations, said co-author Hugh Sweatman, of the Australian Institute of Marine Science in Townsville, Queensland.