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ALLURING LIGURIA
Italy's Belle of the Seas

MOVIE MARATHONS FOR ALL


A coy clownfish.


The crew going out with the Immersive Media camera.


A dugong ponders its future.

Reef devastated by the Tsunami.

Witnesses to the Tsunami

The 2007 Tsunami left more than human casualties in its wake. It destroyed a great deal of coral reefs and has sparked off a chain of destruction in the marine ecosystem. Will nature win its own war?

By **Orla Doherty,** Managing Director, PCRF.

At the turn of the new year, we returned to an area of islands and reefs that we had studied since 2000. Our study site here is a platform reef, formerly known as 'One Tree' island because of the proud, single silver tree that once stood upon a pile of rocks. The tree is no longer there and the reef has now been renamed 'No Tree'.

On 2 April 2007, close to eight o'clock in the morning, there was an earthquake of magnitude 8.1 whose epicenter lay just 20 nautical miles to the southeast of 'No Tree'. Most islands in the western province of the Solomons shook to their core. Nobody could stand upright during the earthquake and several of its aftershocks. A few minutes later, a tsunami radiated out from the underwater epicenter, killing over 50 people and removing entire villages from the shore. Houses floated in the sea, gardens were ruined and landslides wrecked coastlines. We reunited with friends and listened to their stories of watching the sea recede just before the tsunami struck, how they survived the experience – one friend was carried to the top of a tall coconut tree by the waves while he watched his boat and outboard engine sink way below him – and how others didn't.

On the reef study site, we repeated our Vitareef and transect methodologies for the fourth time in eight years. We've watched this reef struggle. Back in 2000, we collected data on corals while they were almost literally bleaching in front of our eyes. The bleaching, caused by elevated sea temperatures due to global warming, affected mostly the table *Acropora* colonies on the reef top. When we returned two years later we found their skeletons although the rest of the reef had recovered reasonably well. In 2006, the reef was in decline again – another bleaching event was in process during our stay and crown of thorns infestations had broken out on the next-door reef. A slow degradation of the reef systems in the area had also become evident due to sedimentation pouring off the nearby logging stations on Kolumbanggara island. In other words, multiple effects had taken their toll over time.

Today the reef is a shadow of its former self, as are most reefs in the area. The violence of the earthquake toppled over large areas of living coral, killing most of them. The only unaffected patches of reef are where *Porites* boulders brace each other from the impact close to the reef top. The slopes are now mostly graveyards of rubble and boulders. A diverse fish population still hovers over the reef and we even spotted a dugong! But without a healthy substrate and with continued economic pressure on the reef ecosystem as communities struggle to find funds to reconstruct their villages, the future of these reefs and the organisms are hanging in the balance.

Returning here in a few years time to continue our work at the site will be the only way to tell if the reef recovers its strength and becomes repopulated by new coral colonies; or if the entire system collapses altogether.

"Join the Voyage" of the SV Infinity, Raffles Marina's "club at sea" in Nautique and PCRF's homepage at **www.pcrf.org**. *Together on our mission to conserve and protect the coral reefs and oceans, we can make a difference!*