



Project 1.1 'Monitoring status and trends of coral reefs of the Great Barrier Reef'

After the storm - are reefs recovering ?

Between 2008 and 2011, 59% of the reefs of the GBR were exposed to damaging or very damaging winds, principally from two category 5 cyclones: Severe Tropical Cyclones Hamish (March 2009) and Yasi (February 2011). Average cover of hard coral on AIMS survey reefs from Cairns to the southern end of the GBR dropped from 29.4% in 2007 to 22.5% in 2011. The 33 survey reefs in central and southern subregions that bore the brunt of the storms lost 40% of their coral: average cover on these reefs dropped from 30.3% to 18.3% in the same interval.

If reef recovery depends on coral larvae arriving from undamaged reefs nearby, such broad-scale destruction of coral communities could mean fewer reproductive adults and fewer larvae, so recovery would be slowed. Densities of juvenile corals (<5 cm diam.) are one indication of recovery potential. Survey reefs in subregions exposed to cyclones Yasi or Hamish had lower counts of juveniles immediately after those storms. However, two years later, the numbers of juvenile corals per area of colonisable space on sample reefs had increased and had reached or surpassed pre-disturbance densities. This suggests that recovery is underway, but it will require more than a decade without major disturbance for coral cover to reach former levels.

