

Project 8.1 - Monitoring the ecological effects of GBR zoning plan on mid and outer shelf reefs

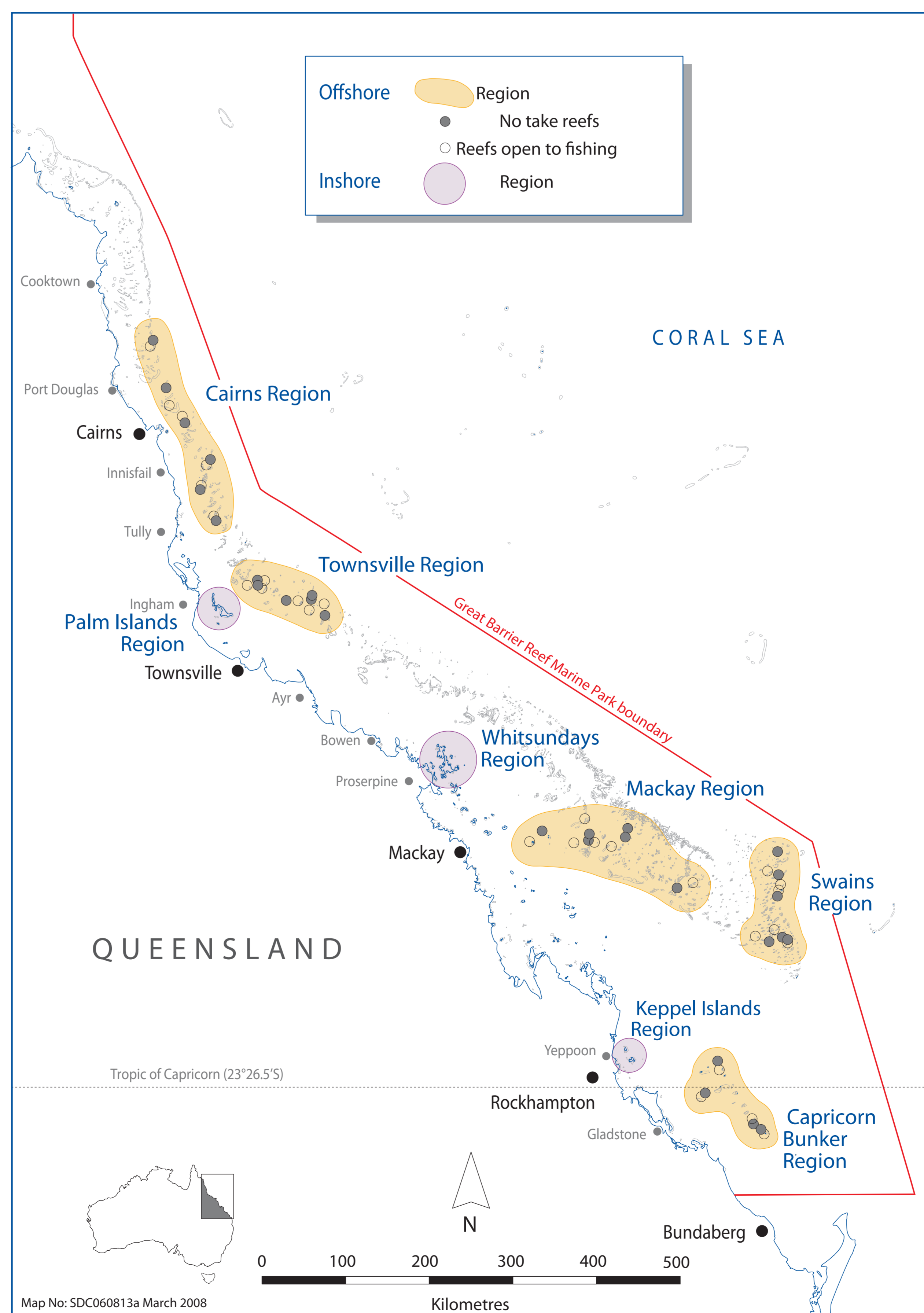
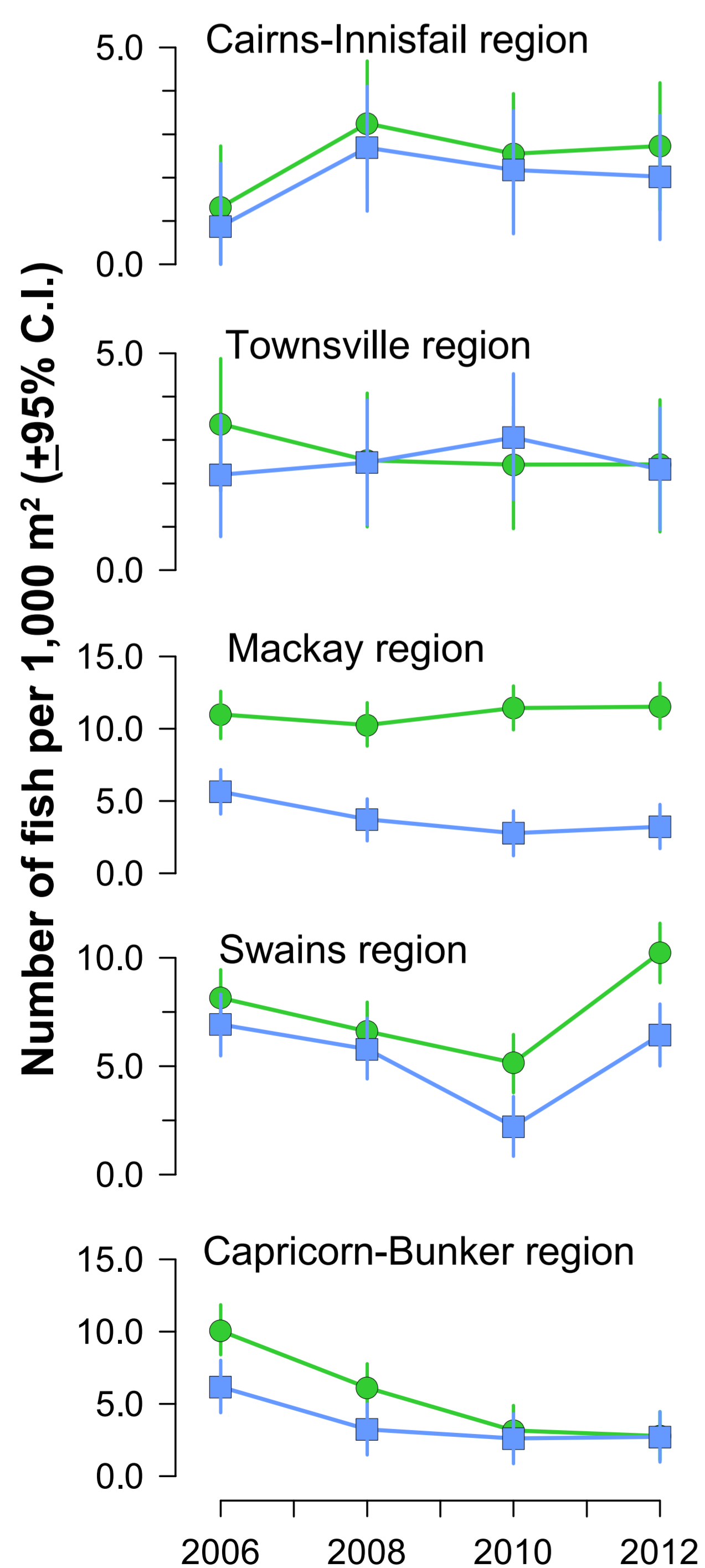
Coral trout abundance and biomass

In mid-2004 a new zoning plan for the Great Barrier Reef Marine Park came into effect, with the aim of protecting the Reef's biodiversity. A major component of the new plan was a great increase in the area of the GBRMP that was closed to fishing. The AIMS monitoring program has been assessing the coral communities and fish communities on 56 mid-shelf and offshore reefs set in five regions (see map). Pairs of reefs in each region were matched by size and distance from shore and underwater seascape. All the survey reefs had been open to fishing prior to 2004 (Blue), but one reef in each pair was closed to fishing (becoming Green) under the new zoning plan. Starting in 2005-06 these pairs of reefs have been surveyed in alternate years. Here we show changes in abundance and biomass of coral trout species, a principal target for the reef line fishery.

This study groups all coral trout species, though the great majority are *Plectropomus leopardus*. Numbers of coral trout are generally higher on southern reefs. With the clear exception of reefs near Mackay, initial differences between green and blue reefs have not been maintained in many regions. Numbers and biomass of coral trout are not very different on blue and green reefs in the northern and far southern regions. In the far south, the Capricorn-Bunker reefs were damaged by storms and lost the majority of their coral, which is habitat for coral trout and their prey. The same may be true to a lesser extent for outer reefs off Townsville that were damaged by TC Yasi in 2011.



Abundance of coral trout (all spp.)



Biomass of coral trout (all spp.)

