Keppel Islands

CoralWatch data overview: May 2013 - June 2019

CoralWatch uses the Coral Health Chart to measure changes in coral colour associated with coral bleaching. The chart is easy to use, you can help collect data and contribute to the CoralWatch global database.



What does the data tell us?

The graph above shows an average coral score between 3-4, indicating healthy reefs, although at the start of 2017 some potential bleaching was identified on Great Keppel. The graph at the right shows that the dominant coral type being monitored at Great Keppel is branching while at North Keppel more soft corals were monitored. When interpreting the data, keep in mind that some corals are naturally lighter than others. One survey is just a snapshot in time. Regular CoralWatch surveys are needed to look at health over time or pick up trends of bleaching and recovery.

Plate coral, Acropora sp.



Branching coral, Acropora sp.

KEPPEL ISLAND CORALS

Boulder coral, Favites sp.

CORALWATCH







WWW.CORALWATCH.ORG

KEPPEL ISLANDS

April 2013 - June 2019

Highest data contributor Rockhampton Grammar



12 reefs



133 surveys



3,403 corals



CORAL TYPE



Soft coral, Sarcophyton sp.

KEPPEL ISLANDS



14 ISLANDS REEFS WITHIN EASY REACH >150 CORAL SPECIES

IMPORTANCE

TOURISM RECREATIONAL AND COMMERCIAL FISHING EDUCATION



MAIN THREATS

SEDIMENT MARINE DEBRIS STORMS CORAL BLEACHING





REDUCE CARBON EMISSIONS HELP SAVE REEFS FROM HOME



Keppel Islands

Keppel Bay, off Central Queensland's Capricorn Coast, includes 14 islands of which 13 are National Park and 2 are restricted due to their scientific values. The islands are the traditional home of the Woppaburra people.

The Great Barrier Reef (GBR) Marine Park surrounds the Keppel Bay islands providing protection to the underwater beauty and biological diversity of this area. Many of the islands in this region are surrounded by fringing reefs with abundant coral communities dominated by fast growing *Acropora* species. This region is not immune to the effects of anthropogenic pressures with an increase in flooding and bleaching events over the past 20 years.

Despite a major bleaching event in 2006 causing bleaching to 60% of corals in the Keppel Bay, conditions returned soon after this event allowing corals to return to their original colour and health. This was a remarkable display of the resilience coral has when given the chance to recover. In more recent bleaching events, the Keppel Bay region has been very lucky to escape severe bleaching with only 1% severely bleached and consequently dying. Bigger threats to this region are storms and an increase in COTS outbreaks in the southern sector of the GBR.

Visit the Keppel Island group and help collect CoralWatch data

The best way to understand the importance and value the beauty of the reef is through your own experience. Visit the reef, it is an experience you will never forget. Visit <u>www.coralwatch.org</u> to find out how to use the Coral Health Chart, collect and upload your data.

Schools can stay at North Keppel Island Environmental Education Centre <u>www.northkeppelislandeec.eq.edu.au.</u> The highly experienced teaching team at the centre support the planning and implementation of visiting group's programs. Resources such as 'Gundoo Spirit', the centre's purpose built boat, are available to make camps fantastic learning experiences.



Citizen scientist collecting CoralWatch data.



Keppel Bay reef showing various acropora species.

Read more

- Informative website with interactive maps and resources for the Keppel Region. https://keppels.com.au/ Published by Dr Ali Jones.
- Kennedy Emma et.al. Coral bleaching in the southern inshore Great Barrier Reef: a case study from the Keppel Islands. Marine and Freshwater Research, 2018, 69, 191–197 (https://doi.org/10.1071/MF16317)
- Australian Institute of Marine Science (AIMS). 2012, Baseline coral and benthic cover surveys of Keppel Islands reefs, Great Barrier Reef: 2008-2010 (<u>https://apps.aims.gov.au/metadata/view/85658633-4cf1-47d0-9ee0-89f4651a743d</u>, accessed 08-Jul-2019)
- Williamson et.al. Assessing the cumulative impacts of climatic disturbances on coral reefs in the Keppel Islands, Great Barrier Reef Marine Park. ARC Centre of Excellence for Coral Reef Studies, James Cook University. (<u>https://nesptropical.edu.au/wp-content/uploads/2016/05/NESP-TWQ-2.1-FINAL-REPORT.pdf</u>)
- Look after the reef and find out what activities are permitted in which zone http://elibrary.gbrmpa.gov.au/jspui/bitstream/11017/609/4/Map17-EditionV-Capricorn.pdf
 Help collect valuable reef data, there is a citizen science project for everyone http://greatbarrierreefcitizenscience.org.au/



CoralWatch is a global citizen science organisation working with volunteers worldwide to increase understanding of coral reefs, coral bleaching and climate change. <u>www.coralwatch.org</u>







July 2019. Photos: Ray Berkelmans (RB), Phill Bessel (PB), Andrew Gill (AG), Karen Hofman (KH), Chris Roelfsema (CR) . This community report card is published by CoralWatch and is funded by QLD government.