

Results of benthic organisms, reef fishes and manta tow surveys of Capricorn Bunker reefs in October 2015 (NESP TWQ 3.7, AIMS)


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Title	Results of benthic organisms, reef fishes and manta tow surveys of Capricorn Bunker reefs in October 2015 (NESP TWQ 3.7, AIMS)
Date	2016-06-09
Date type	Publication
Abstract	<p>This dataset consists of summaries of benthic, fish and manta tow surveys conducted in the Capricorn-Bunker Region of the Great Barrier Reef in October 2015. It consists of three tables:</p> <ol style="list-style-type: none"> 1. A table summarising percent cover of benthic organisms grouped into broad categories from photo transects collected during the monitoring surveys. 2. A table of average abundance for each reef fish species on the 5 transects in each of the three sites on each reef is presented for the eight reefs surveyed. 3. A table of the average reef wide coral cover, the mean reef-wide density of crown-of-thorns starfish (CoTS), <i>Acanthaster planci</i> and the mean reef-wide density of coral trout for each reef based on manta tow surveys. <p>This dataset is an extract from part of the AIMS Long Term Monitoring database.</p> <p>The rezoning of the Great Barrier Reef Marine Park (GBRMP) in 2004 increased the number and extent of 'no-take' areas within the Park. This project surveys pairs of reefs, one in a 'no-take' or green zone and the other a similar reef where fishing is allowed (blue zone), in five regions of the GBRMP. Green and blue zones will be surveyed for the abundance and size of fishery species, particularly coral trout, as well as wider effects on coral reef communities. Surveys of coral communities are undertaken in the same location as surveys of fishes. Biennial surveys commenced in 2006.</p> <p>Methods:</p> <p>Benthic surveys: Coral communities were surveyed on eight reefs (Boult Reef, Broomfield Reef, Erskine Reef, Fairfax Islands Reef, Hoskyn Islands Reef, Lady Musgrave Reef, Mast Head Reef, North Reef (North)) in the Capricorn-Bunkers region using digital still images taken along five permanent 50 m transects in each of three sites per reef (n = 15 transects). Forty images were selected randomly from the fifty taken per transect for analyses. The benthic organisms under five points per image arranged in a quincunx pattern were identified (n = 200 points per transect). Benthic organisms were identified to the highest taxonomic resolution possible and each organism is assigned a lifeform based on its shape. Data were converted to percent cover and the site averages is presented for each reef surveyed. AIMS LTMP Standard Operating Procedure 10. The data summaries the latest survey from a time-series of biennial surveys that commenced in 2006. Temporal trends at each reefs are available on http://data.aims.gov.au/reefpage2/allreefs.jsp</p> <p>Reef fish surveys: The abundance of ten families of conspicuous, diurnally active reef fishes was enumerated using standard underwater visual census techniques. Sites are located in a standard reef</p>

slope habitat on the north-eastern flank of each reef between 6 to 12m, and consist of five permanently marked 50 m transect (n=15 per reef). Damselfishes (Pomacentridae) were surveyed on one metre wide belt transects while the remaining nine families of large mobile fishes (Acanthuridae, Chaetodontidae, Labridae, Lethrinidae, Lutjanidae, Scaridae, Siganidae, Serranidae and Zanclidae) were counted on five metre wide belts. See AIMS LTMP Standard Operating Procedure 3.

Manta tow surveys:

Broadscale surveys of reef-wide coral cover, densities of crown-of-thorns starfish and of coral trout using manta tows involve a snorkel diver being towed around the perimeter of the reef. The boat stops every 2 min to allow data to be recorded. See AIMS LTMP Standard Operating Procedure 9.

Format:

CapBunk_NESP-TWQ-3-7_AIMS_Benthic_2015-10.csv, CapBunk_NESP-TWQ-3-7_AIMS_Benthic_2015-10.shp:

Average percent cover of groups of benthic organisms on each of 3 sites on survey reefs in the Capricorn-Bunkers, GBR

Description of lifeforms are published in the Standard Operation Procedures, Appendix III

See: AIMS LTMP Standard Operating Procedure 10

The following are the classifications in the dataset:

- Turf algae
- Tabulate Acropora
- Coralline algae
- Branching Acropora
- Encrusting non-Acropora
- Sand
- Massive non-Acropora
- Macroalgae
- Submassive non-Acropora
- Soft coral
- Digitate Acropora
- Arb & Enc Soft Coral
- Arborescent Soft Coral
- Capitata Soft Coral
- Foliose non-Acropora
- Encrusting Acropora
- Millepora
- Branching non-Acropora
- Submassive Acropora
- Sponge
- Other organisms
- Encrusting Soft Coral
- Zoanthid
- Bottlebrush Acropora
- Dead coral (recent)
- Rubble
- Lobate Soft Coral
- Massive Soft Coral
- Mushroom coral
- Abiotic
- Solitary coral
- Unknown

The shapefile was created from the CSV. This process involved truncating the attribute names to comply with 10 character limit of the shapefile format. The CapBunk_NESP-TWQ-3-7_AIMS_Benthic_2015-10.aliases.csv file contains a lookup table that maps the shortened attribute names in the shapefile to the original longer names in CSV file.

CapBunk_NESP-TWQ-3-7_AIMS_Fish_2015-10.csv:

Consists of a summary of the raw counts of reef fishes. The average abundance for each reef fish species per 1,000 m² is presented for each of the 3 sites on the eight reefs surveyed in October 2015. Note: this table also includes rows for species that were searched for, but none were observed. These correspond to rows where the abundance is 0.

CapBunk_NESP-TWQ-3-7_AIMS_Manta-tow_2015-10.csv:

Summary of the manta tow results for the surveyed reefs, including the mean hard coral cover (average over all tows on reef), CoTS (count per tow) and trout (count per tow).

Data Location:

This dataset is saved in the eAtlas enduring data repository at: data\NESP1\3.7_GBR_Zoning\

Metadata language eng

Character set UTF8

Hierarchy level Dataset

OnLine resource

Linkage <https://eatlas.org.au/data/uuid/1783f7ca-5abf-4b33-809f-ffe08c66703c>

Protocol WWW:LINK-1.0-http--metadata-URL

Linkage <http://www.aims.gov.au/docs/research/monitoring/reef/sampling-methods.html>

Protocol WWW:LINK-1.0-http--link

Linkage <https://eatlas.org.au/nesp-twq-1/gbr-zoning-3-7>

Protocol WWW:LINK-1.0-http--related

Linkage <https://eatlas.org.au/nerp-te/gbr-aims-monitoring-zoning-mpa-mid-outer-shelf-reefs-8-1>

Protocol WWW:LINK-1.0-http--related

Linkage <http://www.aims.gov.au/docs/research/monitoring/reef/reef-monitoring.html>

Protocol WWW:LINK-1.0-http--link

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Protocol WWW:LINK-1.0-http--link

Linkage <http://data.aims.gov.au/reefpage2/allreefs.jsp>

Protocol WWW:LINK-1.0-http--link

Linkage https://eatlas.org.au/pydio/data/public/capbunk_nesp-twq-3-7_aims_oct-2015_zip.php

Protocol WWW:LINK-1.0-http--downloaddata

Linkage https://maps.eatlas.org.au/index.html?intro=false&z=10&ll=152.13833,-23.51793&l0=ea_nesp1%3ACapBunk_NESP-TWQ-3-7_AIMS_Benthic_2015-10,ea_ea-be%3AWorld_Bright-Earth-e-Atlas-basemap,google_HYBRID,google_TERRAIN,google_SATELLITE,google_ROADMAP&v0=,,f,f,f,f

Protocol WWW:LINK-1.0-http--related

Linkage <https://eatlas.org.au/data/uuid/71127e4d-9f14-4c57-9845-1dce0b541d8d>

Protocol WWW:LINK-1.0-http--related

Linkage <https://maps.eatlas.org.au/maps/wms>

Protocol OGC:WMS-1.1.1-http-get-map

Point of contact

Individual name Sweatman, Hugh, Dr

Organisation name Australian Institute of Marine Science (AIMS)

Position name	Senior Research Scientist, Leader of AIMS Long-term Monitoring Program for coral reefs of the Great Barrier Reef
Role	Point of contact
Topic category	Biota

Extent

Description	Sites location, Great Barrier Reef, Australia
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Geographic bounding box

West bound	151.74968
East bound	152.41978
South bound	-23.8835
North bound	-23.17549

File identifier	1783f7ca-5abf-4b33-809f-ffe08c66703c
Metadata language	eng
Character set	UTF8

Metadata author

Individual name	eAtlas Data Manager
Organisation name	Australian Institute of Marine Science (AIMS)
Role	metadataContact
Date stamp	2017-01-17T13:38:41